

## Refine Search

### Search Results -

Terms	Documents
L29 and (payment with card or payment near card or payment adj card)	21

**Database:** US Pre-Grant Publication Full-Text Database  
 US Patents Full-Text Database  
 US OCR Full-Text Database  
 EPO Abstracts Database  
 JPO Abstracts Database  
 Derwent World Patents Index  
 IBM Technical Disclosure Bulletins

**Search:**

### Search History

**DATE:** Wednesday, January 31, 2007 [Purge Queries](#) [Printable Copy](#) [Create Case](#)

**Set**  
**Name** **Query**  
 side by  
 side

**Hit** **Set**  
**Count** **Name**  
 result set

*DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR*  
L30 L29 and (payment with card or payment near card or payment adj card)  
L29 (currency or money) near2 (conversion or convert or exchange) near2 table  
 and (code or id or identifier)  
*DB=USPT; PLUR=YES; OP=OR*  
L28 '6058379'.pn.  
L27 '5631827'.pn.  
*DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR*  
L26 L17 and 705/40  
L25 L24 and 705/40  
L24 116 not @py >1999  
L23 116 not @py>1999  
L22 705/23  
L21 705/43

21 L30 *all*  
 60 L29 *all*  
 1 L28  
 1 L27  
 6 L26 *all*  
 26 L25 *all*  
 83953 L24  
 83953 L23  
 562 L22  
 703 L21

## Refine Search

### Search Results -

Terms	Documents
currency near conversion near card	13

**Database:**

US Pre-Grant Publication Full-Text Database  
 US Patents Full-Text Database  
 US OCR Full-Text Database  
 EPO Abstracts Database  
 JPO Abstracts Database  
 Derwent World Patents Index  
 IBM Technical Disclosure Bulletins

**Search:**




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### Search History

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**DATE:** Wednesday, January 31, 2007 [Purge Queries](#) [Printable Copy](#) [Create Case](#)

**Set**
**Name** **Query**

 side by  
 side

*DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR*

L5 currency near conversion near card

*DB=USPT; PLUR=YES; OP=OR*

L4 ("5870473")[URPN]

(3956615 | 5627892 | 5465206 | 5455407 | 5224164 | 5574785 | 5535276 |

L3 5434918 | 5555309 | 5428745 | 5349642 | 4799156 | 5420926 | 5235642 |  
 4906828 | 4529870 | 5604801 | 5369705 | 5453601 | 5602918 | 5410602)![PN]

L2 ("5870473")[PN]

*DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR*

L1 5870473.pn.

**Set**  
**Hit Count** **Name**  
 result set

13 L5 all  
 28 L4 all  
 21 L3 all

1 L2

2 L1

END OF SEARCH HISTORY

L20 L17 and (code or codes or "id" or identifier)and table  
L19 L17 and (code or codes or "id" or identifier)  
L18 L17 and (code or codes)  
L17 (currency or money) near2 (conversion or convert or exchange) near2 table  
L16 235.clas.  
L15 235/380  
L14 235/379  
L13 902/40  
L12 902.clas.  
L11 705.clas.  
L10 705/80  
L9 705/79  
L8 705/78  
L7 705/76  
L6 705/39  
L5 705/26  
L4 705/14  
L3 705/44  
L2 705/41  
L1 705/40

60 L20  
60 L19  
55 L18  
105 L17  
97621 L16  
9836 L15  
6047 L14  
101 L13  
2199 L12  
47861 L11  
505 L10  
255 L9  
368 L8  
485 L7  
2140 L6  
7072 L5  
5127 L4  
1285 L3  
907 L2  
1794 L1

END OF SEARCH HISTORY

## Refine Search

### Search Results -

Terms	Documents
L17 and issuer with (id or identifier or identifi\$)	5

**Database:**  
 US Pre-Grant Publication Full-Text Database  
 US Patents Full-Text Database  
 US OCR Full-Text Database  
 EPO Abstracts Database  
 JPO Abstracts Database  
 Derwent World Patents Index  
 IBM Technical Disclosure Bulletins

**Search:**

### Search History

DATE: Wednesday, January 31, 2007 [Purge Queries](#) [Printable Copy](#) [Create Case](#)

**Set**  
**Name** **Query**

side by  
 side

*DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR*

L18 L17 and issuer with (id or identifier or identifi\$)

L17 currency with translation and table and code

L16 currency near translation near table

*DB=USPT; PLUR=YES; OP=OR*

L15 ("RE36365")[URPN]

(3971916 | 4211919 | 4001550 | 4485300 | 4614861 | 4701601 | 4447716 |

L14 4256955 | 4443049 | 4417413 | 4092524 | 4102493 | 4007355 | 4251867 |  
 4222516 | 4249163 | 4295041)![PN]

L13 ("4766293")[PN]

L12 (5012077 | 4707592 | 4700055 | 5101098 | 4766293 | 5038022 | 4837422 |  
 5206488 | 5577109 | 5068891 | 5557516 | 5267149 | 5511114)![PN]

L11 ("RE36365")[PN]

*DB=PGPB,USPT,USOC; PLUR=YES; OP=OR*

**Set**  
**Hit Count** **Name**  
 result set

5 L18 *all*  
 541 L17  
 0 L16  
 27 L15  
 17 L14 *all*  
 1 L13  
 13 L12  
 1 L11

L10 table and currency near code  
*DB=EPAB,JPAB; PLUR=YES; OP=OR*  
L9 table and currency near code  
*DB=DWPI,TDBD; PLUR=YES; OP=OR*  
L8 table and currency near code  
L7 (foreign or international) near (currency or money or cash) near (code or id or identifi\$ or identifier) and table  
*DB=USPT; PLUR=YES; OP=OR*  
L6 (foreign or international) near (currency or money or cash) near (code or id or identifi\$ or identifier) and table  
*DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR*  
L5 (foreign or international) near (currency or money or cash) near (code or id or identifi\$ or identifier) and table  
L4 (foreign or international) near (currency or money or cash) near code and table  
L3 L2 and issuer with (id or identifier or identifi\$) near code  
L2 table and currency near code  
L1 table near currency near code

333 L10

1 L9 *all*

0 L8

0 L7

2 L6

3 L5

1 L4

6 L3

334 L2

*all*

END OF SEARCH HISTORY

? d s

Set Items Description

S1 1309516 S TABLE (3N) CURREN?? OR MONEY? OR CASH?

S2 56 S CURRENCY? (N3) CONVERSION (N2) TABLE?

S3 1494490 S BROKER? OR AGENT? OR INTERMEDIARY? OR (THIRD OR 3RD) () PARTY OR  
MIDDLEMAN OR MIDDLEMEN

S4 2928055 S TRANSACT? OR SALE? OR TRAD? OR DUTCHACTION? OR METAAUCTION?

S5 16 S S1 AND S2 AND S3 AND S4

S6 16 RD (unique items)

?

? show files

[File 474] **New York Times Abs** 1969-2007/Jan 31  
(c) 2007 The New York Times. All rights reserved.

[File 475] **Wall Street Journal Abs** 1973-2007/Jan 31  
(c) 2007 The New York Times. All rights reserved.

[File 99] **Wilson Appl. Sci & Tech Abs** 1983-2007/Dec  
(c) 2007 The HW Wilson Co. All rights reserved.

[File 256] **TecInfoSource** 82-2007/Aug  
(c) 2007 Info.Sources Inc. All rights reserved.

[File 348] **EUROPEAN PATENTS** 1978-2006/ 200704  
(c) 2007 European Patent Office. All rights reserved.

*\*File 348: For important information about IPCR/8 and forthcoming changes to the IC= index, see HELP NEWSIPCR.*

[File 349] **PCT FULLTEXT** 1979-2007/UB=20070125UT=20070118  
(c) 2007 WIPO/Thomson. All rights reserved.

*\*File 349: For important information about IPCR/8 and forthcoming changes to the IC= index, see HELP NEWSIPCR.*

[File 347] **JAPIO** Dec 1976-2006/Sep(Updated 061230)  
(c) 2007 JPO & JAPIO. All rights reserved.

[File 625] **American Banker Publications** 1981-2007/Jan 30  
(c) 2007 American Banker. All rights reserved.

[File 637] **Journal of Commerce** 1986-2007/Jan 25  
(c) 2007 Commonwealth Bus. Media. All rights reserved.

[File 169] **Insurance Periodicals** 1984-1999/Nov 15  
(c) 1999 NILS Publishing Co. All rights reserved.  
*\*File 169: This file is closed (no longer updating).*

[File 268] **Banking Info Source** 1981-2007/Jan W3  
(c) 2007 ProQuest Info&Learning. All rights reserved.

[File 626] **Bond Buyer Full Text** 1981-2007/Jan 31  
(c) 2007 Bond Buyer. All rights reserved.

[File 267] **Finance & Banking Newsletters** 2007/Jan 29  
(c) 2007 Dialog. All rights reserved.

[File 139] **EconLit** 1969-2007/Jan  
(c) 2007 American Economic Association. All rights reserved.

[File 608] **KR/T Bus.News.** 1992-2007/Jan 31

(c)2007 Knight Ridder/Tribune Bus News. All rights reserved.

?

b 15, 9, 610, 810, 275, 476, 624, 621, 636, 613, 813, 16, 160, 634, 148, 20, 35, 583, 65, 2

[File 15] **ABI/Inform(R)** 1971-2007/Jan 30  
(c) 2007 ProQuest Info&Learning. All rights reserved.

[File 9] **Business & Industry(R)** Jul/1994-2007/Jan 30  
(c) 2007 The Gale Group. All rights reserved.

[File 610] **Business Wire** 1999-2007/Jan 31  
(c) 2007 Business Wire. All rights reserved.

*\*File 610: File 610 now contains data from 3/99 forward. Archive data (1986-2/99) is available in File 810.*

[File 810] **Business Wire** 1986-1999/Feb 28  
(c) 1999 Business Wire . All rights reserved.

[File 275] **Gale Group Computer DB(TM)** 1983-2007/Jan 30  
(c) 2007 The Gale Group. All rights reserved.

[File 476] **Financial Times Fulltext** 1982-2007/Jan 31  
(c) 2007 Financial Times Ltd. All rights reserved.

[File 624] **McGraw-Hill Publications** 1985-2007/Jan 30  
(c) 2007 McGraw-Hill Co. Inc. All rights reserved.

*\*File 624: Homeland Security & Defense and 9 Platt energy journals added Please see HELP NEWS624 for more*

[File 621] **Gale Group New Prod.Annou.(R)** 1985-2007/Jan 24  
(c) 2007 The Gale Group. All rights reserved.

[File 636] **Gale Group Newsletter DB(TM)** 1987-2007/Jan 30  
(c) 2007 The Gale Group. All rights reserved.

[File 613] **PR Newswire** 1999-2007/Jan 31  
(c) 2007 PR Newswire Association Inc. All rights reserved.

*\*File 613: File 613 now contains data from 5/99 forward. Archive data (1987-4/99) is available in File 813.*

[File 813] **PR Newswire** 1987-1999/Apr 30  
(c) 1999 PR Newswire Association Inc. All rights reserved.

[File 16] **Gale Group PROMT(R)** 1990-2007/Jan 30  
(c) 2007 The Gale Group. All rights reserved.

[File 160] **Gale Group PROMT(R)** 1972-1989  
(c) 1999 The Gale Group. All rights reserved.

[File 634] **San Jose Mercury** Jun 1985-2007/Jan 28  
(c) 2007 San Jose Mercury News. All rights reserved.

[File 148] **Gale Group Trade & Industry DB** 1976-2007/Jan 24  
(c) 2007 The Gale Group. All rights reserved.

[File 20] **Dialog Global Reporter** 1997-2007/Jan 31  
(c) 2007 Dialog. All rights reserved.

[File 35] **Dissertation Abs Online** 1861-2007/Jan  
(c) 2007 ProQuest Info&Learning. All rights reserved.

[File 583] **Gale Group Globalbase(TM)** 1986-2002/Dec 13  
(c) 2002 The Gale Group. All rights reserved.  
*\*File 583: This file is no longer updating as of 12-13-2002.*

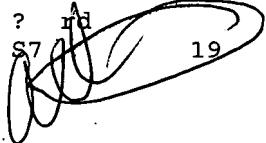
[File 65] **Inside Conferences** 1993-2007/Jan 30  
(c) 2007 BLDSC all rts. reserv. All rights reserved.

[File 2] **INSPEC** 1898-2007/Jan W3  
(c) 2007 Institution of Electrical Engineers. All rights reserved.

? d s  
Set Items Description  
S1 0 S TABLE (W) CURRENCY (W) CODE  
S2 13142899 S TABLE (3N) CURREN?? OR MONEY? OR CASH?  
S3 150 S CURRENCY? (N3) CONVERSION? (N2) TABLE?  
S4 8069431 S BROKER? OR AGENT? OR INTERMEDIARY? OR (THIRD OR 3RD) () PARTY OR  
MIDDLEMAN OR MIDDLEMEN  
S5 34714060 S TRANSACT? OR SALE? OR TRAD? OR DUTCHACTION? OR METAAUCTION?

? s s3 and s4 and s5  
150 S3  
8069431 S4  
34714060 S5  
S6 22 S S3 AND S4 AND S5

? rd  
S7 19 RD (UNIQUE ITEMS)



? t s7/medium,k/all

7/K/1 (Item 1 from file: 15) **Links**

ABI/Inform(R)

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02103421 65227906

**Internet shatters travel model**

Rosen, Cheryl

Informationweek n816 pp: 56-60

Dec 11, 2000

**ISSN: 8750-6874 Journal Code: IWK**

**Word Count:** 1370

**Abstract:**

At one time, part of a travel **agent**'s job was to direct customers to the vendor offering the highest bonus. Now, the...

...and some startup airlines such as JetBlue Airways have made a business model of online **sales** and paperless ticketing, funneling the savings into low fares for all their passengers, all the...

**Text:**

...the days when "travel" meant camels by day and oases by night, there have been **middlemen** between travelers and suppliers. They were paid a commission to bring in the customers, take...

...questions about the Mysterious East, the Dark Continent, the New World. In modern times, travel **agents** added technology to that equation, linking via hard-wired networks to airlines' inventory systems through...

...and online shoppers have access to the same information that once only a registered travel **agent** could find. "We're seeing smarter consumers everywhere," says Tony Gonchar, customer-relationship management director ...

...booked his own flight, caught up on the latest airline merger and strike information, checked **currency-conversion tables**, accessed local weather and entertainment listings, printed out directions from the airport to the hotel...

...boss electronically.

"Where 20 years ago the international business traveler reached out to a travel **agent** for everything from an itinerary to a passport, road warriors now are much smarter than the **agent**," says Phil Dunphy, corporate travel manager at Pfizer Inc. in New York. "They're getting so much live information that even if they do call an **agent** to make the

booking for them, their conversation is at a much higher level."

For...

...to Yahoo Travel, travel sites let customers get beyond the three or four flights an **agent** would read them over the phone and instead see the full inventory of thousands of...

...right thing" when they see all their options.

At one time, part of a travel **agent**'s job was to direct customers to the vendor offering the highest bonus. Now, the...

...and some startup airlines such as JetBlue Airways have made a business model of online **sales** and paperless ticketing, funneling the savings into low fares for all their passengers, all the...but also for the customer service that has been the hallmark of the human travel **agent**. At Expedia.com, for example, customers get a packet of destination information five days before...

...that informs them of the status and departure gate of their flights, kiosks and curbside **agents** with wireless devices to check them in and create baggage tags, even systems that allow...

7/K/2 (Item 2 from file: 15) Links

ABI/Inform(R)

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01748114 03-99104

**Pricing in euroland**

Knox, Andrea

World Trade v12n1 pp: 52-56

Jan 1999

**ISSN: 1054-8637 Journal Code: WLD**

**Word Count: 2449**

**Text:**

...own advantages. The new currency will give the Europeans a leg up by eliminating all **transaction** and hedging costs within Euroland, while US firms will continue to bear the costs and...

...previously found it too expensive to move outside their borders. These new players, rather than **traditional** competitors, are likely to pose the greatest threat to American companies, says Virginia Benson, a...

...of pan-European selling could spur the growth of discount retail chains and of Internet **sales**, putting pressure on retail prices and squeezing suppliers all the way up the chain.

Another...being taken by K'nex, which derives more than half its \$110 million in annual **sales** from the EU.

"We don't see a need at present to rethink our price...

...sell across borders.

But prices to wholesalers do vary, because market conditions, tax structures and **trade** practices vary. Wholesalers who can buy from you at a lower price will now have...

...acceptance of certain price levels.

"In countries of southern Europe, like Spain and Portugal, terms **traditionally** are around 90 days, while in northern Europe they can be as low as 15...

...structure and different feature packages offered in different countries. The company is talking with its **third-party** resellers to be sure they understand this impact of the euro, and to begin the...the perceived value to the customer, and then determine how to recover costs and profit."

(Table Omitted)

Captioned as: European **currency conversion** rates against the euro (ECU) for EMU member nations

**Sidebar:**

Eight pricing points to ponder...

7/K/3 (Item 3 from file: 15) Links

ABI/Inform(R)

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01637787 02-88776

**Are You Prepared for the Euro?**

Williams, Kathy

Management Accounting v79n11 pp: 58-62

May 1998

**ISSN: 0025-1690 Journal Code: NAA**

**Word Count: 3429**

**Text:**

...European Union, such as the French franc and Italian lira, for all business and consumer **transactions**. In many respects, while it will be just another currency, for the first time this...

...is being created through the EMU, or European Monetary Union, efforts.

This means that intercountry **trade** is expected to increase significantly with the same ease as business is **transacted**, say, by American parties from New York to Los Angeles. We Americans can **transact** business and purchase goods with the same currency from New York to New Jersey or...

...to California. That's not the case in Europe yet.

Another speculation is that European **trade** will become much more competitive and that with only one currency to contend with, the...

...year period, there's a requirement called "no compulsion, no prohibition," which means that economic **agents** will have to deal in euro and national currency during the transition period. Debts may... ledger. Companies may be used to dealing with multiple currencies, but they generally use a **conversion rate table** to go from one **currency** to the other and back. They look at today's rates, say the French franc against the Italian lira, which is **trading** at X rate today, and they generally apply some sort of conversion rate to compare...

...multinational and one that's doing business with European suppliers or that has offices or **trading** partners there, then I would suspect, regardless of where home office is, you will be...as: Laura Hills. Prestine Software International

It would depend to what extent they intend to **transact** their business overseas. If they're just receiving goods from a supplier in Europe, then...

...but if they're expecting to set up any operations overseas, or their interactions with **trading** partners or customers or suppliers cross

any of the Member State boundaries, then it might...

...t go to a store and use the euro as negotiable currency next year. All **transactions** are happening business to business and therefore from accounting ledger to accounting ledger.

Q: What...

...this create for software vendors?

One significant business issue keeps coming up in the software **sales** process-the speed of implementation. We have constantly been asked, "Say a company decides to...process? Do you own it as a vendor, or do you outsource it to a **third party**? If something goes wrong or we're having trouble during this period, who do I go to? Do I go back to the **third party**, or do I go back to you?"

Q: Is there going to be an actual...

...basda.org. BASDA, the Business & Accounting Software Developers Association is a U.K.-based international **trade** association representing 200 of the leading international developers and suppliers of business and accounting software...

7/K/4 (Item 4 from file: 15) Links

ABI/Inform(R)

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01272403 99-21799

### **Currency converter positions for E-Cash**

Schmerken, Ivy

Wall Street & Technology v14n9 pp: 62

Sep 1996

**ISSN: 1060-989X Journal Code: WSC**

**Word Count: 739**

#### **Abstract:**

On July 1, 1996, Olsen & Associates AG, a developer of forecasting models and other sophisticated **trading** and risk management models, opened its newly designed Web site. It offers everything from a **currency conversion table** to research on foreign exchange markets, a prototype of risk data from J.P. Morgan...

#### **Text:**

...Associates A.G., a Zurich-based developer of foreign exchange forecasting models and other sophisticated **trading** and risk management models, opened its newly designed web site [www.olsen.ch]. It offers everything from a **currency conversion table** to research on foreign exchange markets, a prototype of risk data from J.P. Morgan...

...hot links to related sites such as the Amsterdam Stock Exchange, Charles Schwab and FX Internet **brokers**.

Still, the most popular page is the currency converter, which offers rates-every five minutes...

...The customer would know how much he's going to pay at the point of **sale**. "As a merchant, you display what you accept in various local currencies, but you don...

...says Graber.

E-Cash will also play a big role in "micro payments," which include **transactions** from a penny to \$10, says Graber. "Initially people are going to adopt it slowly..."

...predicts. This is where credit cards really can't offer a good alternative. "Credit card **transactions** are too expensive for doing small amounts." For instance, O&A could charge someone 40...

7/K/5 (Item 1 from file: 275) Links

Gale Group Computer DB(TM)

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02456204 **Supplier Number:** 67833339 (Use Format 7 Or 9 For FULL TEXT )

**Internet Shatters Travel Model -- The ability to shop online has shifted power to consumers.(Internet/Web/Online Service Information)**

Rosen, Cheryl  
InformationWeek , 56

Dec 11 , 2000

ISSN: 8750-6874

**Language:** English **Record Type:** Fulltext; Abstract

**Word Count:** 1440 **Line Count:** 00117

**Abstract:** ...changed the travel business, bringing forth empowered travelers and cutting into the business of travel **agents**. For most consumers, the real draw of the Internet is the ability to save money.... ...to Yahoo Travel, travel sites let customers get beyond the three or four flights an **agent** would read them over the phone and instead see the full inventory of thousands of...

**Text:**

...the days when "travel" meant camels by day and oases by night, there have been **middlemen** between travelers and suppliers. They were paid a commission to bring in the customers, take...

...questions about the Mysterious East, the Dark Continent, the New World. In modern times, travel **agents** added technology to that equation, linking via hard-wired networks to airlines' inventory systems through...

...and online shoppers have access to the same information that once only a registered travel **agent** could find. "We're seeing smarter consumers everywhere," says Tony Gonchar, customer-relationship management director

...

...booked his own flight, caught up on the latest airline merger and strike information, checked **currency-conversion tables**, accessed local weather and entertainment listings, printed out directions from the airport to the hotel...

...boss electronically.

"Where 20 years ago the international business traveler reached out to a travel **agent** for everything from an itinerary to a passport, road warriors now are much smarter than the **agent**," says Phil Dunphy, corporate travel manager at Pfizer Inc. in New York "They're getting so much live information that even if they do call an **agent** to make the booking for them, their conversation is at a much higher level."

For...

...to Yahoo Travel, travel sites let customers get beyond the three or four flights an **agent** would read them over the phone and instead see the full inventory of thousands of...

...right thing" when they see all their options.

At one time, part of a travel **agent**'s job was to direct customers to the vendor offering the highest bonus. Now, the...

...and some startup airlines such as JetBlue Airways have made a business model of online **sales** and paperless ticketing, funneling the savings into low fares for all their passengers, all the...but also for the customer service that has been the hallmark of the human travel **agent**. At Expedia.com, for example, customers get a packet of destination information five days before...

...that informs them of the status and departure gate of their flights, kiosks and curbside **agents** with wireless devices to check them in and create baggage tags, even systems that allow...

7/K/6 (Item 2 from file: 275) Links

Gale Group Computer DB(TM)

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01804820 **Supplier Number:** 17155726 (Use Format 7 Or 9 For FULL TEXT )

**Business applications.(1995 Database Buyer's Guide and Client/Server Sourcebook)(Buyers Guide)**

DBMS , v8 , n6 , p6(8)

May 15 , 1995

**Document Type:** Buyers Guide

ISSN: 1041-5173

**Language:** English **Record Type:** Fulltext; Abstract

**Word Count:** 12368 **Line Count:** 01120

...prints checks directly, or sends payment information to a file than can be exported to **third-party** systems for wire transfers.

Reporting templates help manage payable activities. Imports and validates files from...

...workgroup, and enter miscellaneous cash not associated with any receivables. Provides reporting templates for receivable **transactions**, collection management, payments applications, custom aging, and so on. Tracks all contacts with customers. Runs...

...service #104.

Accounts Receivable 5  
Datamar Systems, San Diego, CA  
619-452-0044

Provides quotes, **sales** orders, invoices, credit-and-debit memos, picking and packing slips, statements and dunning notices. Features ...Windows versions). Modules include System Manager, General Ledger, Financial Reporter, Accounts Receivable, Accounts Payable, Inventory, **Sales** Orders, Purchase Orders, Job Costing, Bill of Materials, and Payroll. The System Manager is required...

...Modules adapt and integrate with other applications and offer features such as table validation and **transaction** importing. The Developer's Toolkit provides additional support for developers to adapt and extend AdaptAccounts...

...materials to the manufactured items. The distribution system provides full serial and lot number controls, **sales**-analysis reporting, blanket-order processing, replenishment reporting, credit management, and a SpeedShip parcel-shipping system...

...modules are: General Ledger, Accounts Payable, Accounts Receivable, Payroll, Order/Invoice Processing, SpeedShip, Inventory Control, **Sales** Analysis, Purchase Order Processing, Bill of Materials, Work Order Management, MRP, and Report Writer. All...

...Management

Asset Software International Corp., Ottawa, Ontario, CANADA  
613-723-7374

Combines the features of **traditional** life cycle asset management with Automatic Data Collection, Integrated Help Desk, and Electronic Asset Procurement...

...so on) that are linked to each asset. Reduces the cost of managing and supporting **traditional** and IT assets within a company. Automatically tracks and identifies all variables and changes of...

...applications. The CRP system is a suite of applications that automates the telesales, telemarketing, field **sales**, customer support and service, and product-improvement functions in an organization. Links with complementary applications such as e-mail and knowledge-based systems. Reader service #112.

**Aurum SalesTrak**

Aurum Software Inc., Santa Clara, CA  
408-986-8100; 800-683-8855

Automates field **sales** organizations with tools for tracking, measuring, and managing the **sales** process. Built on a relational database and designed for mobile use. Offers a definable **sales** process, plus team selling tools that let a **sales** force communicate and coordinate activities and information. Can be combined with Aurum's TeleTrak software to unite field and inside **sales** operations. Benefits include: increased field representative productivity; better communication; shorter **sales** cycles and higher close ratios; improved management reporting and control over the **sales** process; more uniform quoting and forecasting; and improved responsiveness. Streamlines and automates company-wide sharing...other applications. Features include opportunity management, call scripting, project and activity management, automated quote and **sales** order generation, and much more. May be combined with **SalesTrak** software to unite telesales and field **sales**. Benefits include: increased telesales rep productivity; price-book management; improved communication; reduced **sales** cycles and better close ratios; analysis of win/loss ratios, **sales**-team effectiveness, and success against competing products; more effective execution of **sales** and marketing campaigns; and reduction in system implementation time. Streamlines and automates company-wide sharing...

...that consists of a number of modules, and requires no batching or posting. Posts all **transactions** immediately. After-the-fact corrections are handled automatically. Maintains an audit trail and offers an...351-3441; 800-762-1480

An information-management system designed for companies implementing enterprise-wide **sales** and marketing automation in a client/server environment. Runs under open systems architecture while utilizing...

...SQL databases. Provides a closed-loop solution with account management, database marketing, telemarketing, and field **sales**. Integrates different departments within an organization and provides a central relational database for all **sales** and marketing information. Supports remote communications and database synchronization with geographically dispersed locations. Lets organizations tailor their environments so they are able to adopt different **sales**

methodologies, restructure work flow, create new screens and reports, and continually expand the marketing database...

...Reader service #130.

EZ-Flex

Capstone Computing, Seattle, WA  
206-542-5540

An integrated accounting/transaction-processing program for small businesses that includes general ledger, accounts payable and receivable, and payroll. Features include customer and sales tracking, bank reconciliation on multiple banks, invoicing for services or products, cash receipts, processing for...include popup selection windows and cascading menus; on-screen validation of key data; self-balancing transaction entry; extensive forms and reports, including audit and error correction; and automatic month- and year...

...accounts payable, fixed assets, payroll, inventory control, order entry, replenishment, purchasing, warehouse manager, credit manager, sales manager, and finance manager. Reader service #134.

FourGen Visual Enterprise Warehouse Manager

FourGen Software Inc...

...click, information concerning employee performance can be viewed graphically. Data on productivity, by type of transaction and quality of the individual program, ensures that training occurs only in those areas where...

...the data directly into the ledger. User-defined templates enable creation of all off-setting transactions for intercompany accounting. Multicurrency capabilities let customers define as many currencies and rates as needed...

...139.

GeoQuery 4.0

GeoQuery Corp., Naperville, IL  
708-357-0535

Offers database mapping for sales, marketing, field service, and business management applications. Takes business information from databases, contact managers, and...

...it on interactive maps. These maps are used for travel planning by field personnel, allocating sales and service territories, analyzing and targeting marketing programs, preparing business presentations, and in EIS applications...

...sector centroids). Reader service #140.

GrowthPlan

PowerCerv Corp., Tampa, FL  
813-226-2378

An integrated sales/support management system that incorporates PowerCerv's Response and Xceed applications on a single database...

...definition capability, single technician or departmental queuing,

dynamic-diagnostics driven knowledge base, escalation, environment tracking, **third-party** vendor ...accounts receivable, accounts payable, payroll, inventory, order entry/invoicing, job costing, purchase order, **point-of-sale**, and professional time and invoicing, and bank reconciliation. All modules are available in compiled format...  
...New features include ODBC compliance, selection objects, and SQL Query Builder. Reader service #725.

LightShip **Sales** & Market Intelligence System (SMIS)  
Pilot Software Inc., Cambridge, MA  
617-374-9400

A set of tools that lets **sales** and marketing people process business information. Based on the latest OLAP technology. Reader service #144...

...server platform for developing and deploying groupware applications. Improves everyday business processes, including customer service, **sales** and account management, and product development. Client platforms: Windows, OS/2, Macintosh, and Unix (Sun...).

...markets. Concurrent multilingual screens let employees work in their native language. Other international features include **currency conversion** rates by **table** and **transaction**, landed cost-inventory valuation, international shipping manifests, and corporate or international support. Reader service #146.

MAXPro  
Software Concepts Inc., Beaverton, OR  
503-641-1060

Modules for this integrated **point-of-sale** system include multilevel security; windowing interface; and pop-up lookup tables for customer, vendor, inventory, **sales** records, and ledger card. Built-in bar code and cash drawer interface. Supports two printers...

...market developers, and end users capable of programming. Contains general ledger, accounts payable, accounts receivable, **sales** /invoicing, order-entry, inventory, purchase orders, **point-of-sale**, and payroll modules. Supports barcode printing in all applicable situations. Modules can be integrated into...can be performed: product tracking, support-contract management, customer-service and support tracking, literature processing, **sales**-account management, marketing campaign management, customer surveying, and attaching OLE 2.0 objects. List management...

...languages under varied tax structures. With a relational database, it maintains detailed records for automatic **transaction** and summary totals. Consists of the following modules, which can be used independently or integrated...a file server, and application servers. The Windows client handles user interaction for data maintenance,

**transaction** entry, and database queries. The file server is the repository for all executable, system, and...

...companies using different chart of accounts structures and different

fiscal periods; automatic eliminations for intercompany **transactions**; a clear audit trail; high-speed, multiuser processing; a host of user-defined controls; unlimited...

...for installation, configuration, and data access. Each environment is pretested and certified to support stated **transaction** and data volumes as well as simultaneous user loads. To ease system administration, a series...

...character-based and GUI interfaces; flexible design structure; multicompny and multicurrency capability; facilitates high-volume **transaction** processing. Supports AIX, Unix, VMS, OS/2, Windows, and Windows NT. Client interface: character-based...including Process Planning, Process Manufacturing, and Process Costing. Also includes the following modules: Purchase Order, **Sales** Order Processing, Inventory Control, **Sales** Analysis, Warehouse Management, **Sales** Forecasting, and Distribution Planning. Developed with Gembase, it supports relational database environments such as Oracle...

...definition capability, single-technician or departmental queuing, dynamic diagnostics-driven knowledge base, escalation, environment tracking, **third-party** vendor tracking, fulfillment/RMA system interface, and case transfer/e-mail capability. Compatible with all...

...tracks customer deposits and down payments. Works with SQL Financials Accounts Receivable. Lets users import **sales** orders from external or custom order-entry applications. Defines flexible accounting structures. Streamlines invoice processing through the use of accounting rules, payment schedules, **sales** credits, customer defaults, multiple locations, credit memos, and customer deposits/commitments. Provides predefined layouts and...

...invoice formats. Tracks all customer information. Reporting capabilities include templates for reports such as receivable **transactions**, collection management, payment applications, and custom aging. Groups related reports together and sends report output...

...can compare actual, budgeted, and year-to-date figures; prepare consolidated/detailed department reports; link **transactions** from other modules; and so on. Invoicing/Inventory provides user-defined invoices, orders and picking...

...margins, and reorder levels; GL and AR integration; handles taxable, non-taxable, stock, and service **sales**; flags customer-credit limits and outstanding balances; adds, edits, or voids invoices and switches invoicing formats; creates full or partial invoices from **sales** orders; unlimited number of customer dropship addresses; point-of-**sale** invoicing with seven payment types; and so on. PO lets you add or update vendor...

...purchase orders during stock receipt; display inventory/purchase order status; and more. Reader service #175.

**Sales** Analysis 5

Datamar Systems, San Diego, CA

619-452-0044

Used with Accounts Receivable to provide detailed analytical **sales** data. Reports data in a variety of formats allowing the user to analyze **sales** and profits over a three-year span. Modules run on DOS-based systems and can handle up to 254 users. \$249. Reader service #177.

**Sales** and Marketing Solutions

AT&T Global Information Solutions Inc., Dayton, OH

513-445-5000

Designed...

...communications products and services, and consulting services in a readily deployable platform. Reader service #178.

**Sales** Vision Framework for PowerBuilder

**Sales** Vision ...Charlotte, NC

704-549-0609; 600-685-1126

An object-based, vertical application framework for **sales** and marketing, based on Powersoft's PowerBuilder. A non-modal software architecture allows organizations to...

...modal approach to updates, queries, and printing from any point in the application. Suited for **sales**-force automation, relationship management, and complex contact management. Framework includes: documented base class library of...

...objects, which allow rapid creation and modification of application components; a working application model for **sales** and marketing -- created from object-based constructs; soft-copy data model (ERwin), which can be...

...customized in parallel with application customization. \$20,000 for a site license. Reader service #179.

**Salesbase** 2.0

Sierra Software Innovations Inc., Incline Village, NV

702-832-0300; 800-621-0631

An integrated **sales** automation solution for mid- to large-size corporate **sales** organizations. A relational database comprised of four core sections: Contacts, Accounts, Projects, and Opportunities. Supports...

...as a single or distributed database. Data Motion technology sets up a distributed database using **Salesbase** and keeps the field information flowing between the field and corporate headquarters. Offers the ability...  
...information. Customization services are available. \$1400 per user. Volume discounts are available. Reader service #180.

**SalesTEAM**

Scopus Technology Inc., Emeryville, CA

510-597-5884

An enterprise-wide **sales** and marketing automation system. Lets companies manage every phase of the **sales** life cycle, from direct marketing and lead generation, through fulfillment and tracking referenceable customers. Consists of two modules: **SalesTEAM** HQ, and **SalesTEAM** Field Sales. **SalesTEAM** HQ has a direct-marketing component to support database marketing efforts, and a

telesales component for inside **sales** organizations. The telesales component records leads and manages them throughout the telesales process. The direct...

...work from a database of customer, product, and prospect information, to manage direct-marketing campaigns. **SalesTEAM Field Sales** makes information generated from lead resources available for use by field **sales** representatives and channel partners. Integrated with other Scopus workflow automation solutions. Supports Sybase, Oracle, and...

...applications in four core functional areas: Financial and Accounting, Human Resources, Manufacturing and Logistics, and **Sales** and Distribution. Application modules work as standalone products or integrated into a complete enterprise solution...

...Logistics: material requirements, master-production scheduling, shop-floor control, capacity-requirements planning, and product costing. **Sales** and Distribution: **sales**-order processing, shipping, billing, computer-aided **sales**, inventory management, invoice verification, and warehouse management. Runs on IBM, AIX, HP-UX, Sun Solaris...

...in real-time. Applications include: system manager, general ledger, accounts receivable, accounts payable, inventory control, **sales** orders, and purchase orders. Two versions are available. The unlimited version includes FoxPro source code...

...variety of context-sensitive inquiries. Modules includes System Manager, General Ledger, Accounts Receivable, Accounts Payable, **Sales** Orders, Purchase Orders, Payroll, Laser Forms, Fixed Assets, Manufacturing, Job Cost, Time Billing, Property Management...based client/server business applications with vertical products in financials, project management, distribution management, and **sales**-force automation. Features user-defined accounting and reporting structures, unlimited rollups allowing consolidation at any...

...tasks for job costing and resource planning. Provides WIP analysis, powerful reports, and multicurrency features. **SalesForce Automation** lets users track and manage leads from the source; perform database mailings; forecast stages...

...call tracking and support management system for technical support engineers, help desks, field-application engineers, **sales** reps, and marketing managers. Provides the primary interface for managing site, product, and user information...conversion. Applications include General Ledger, Accounts Payable, Accounts Receivable, System Manager, Report Writer, Payroll, Inventory, **Sales** Order, and Purchase Order. Can be used as a standalone, single-user application or as...

...Unitrac Version 4.0

UNITRAC Software Corp, Kalamazoo, MI  
616-344-0220

An enterprise-wide, **sales** and marketing information-management

system. Can be used for virtually all applications that require the tracking of individuals and organizations: **sales** force automation, account management, inbound and outbound telemarketing, mass-mail management, client and prospect tracking...

...a seamless environment in which information can be shared throughout an enterprise. Users can share **sales** leads and other information in synchronized, enterprise-wide databases. Reader service #198.

USL Financials 3...

...General Ledger and supports Windows standards including OLE and ODBC. Reader service #201.

Visual Enterprise **Sales** Manager  
FourGen Software Inc., Seattle, WA  
206-522-0055; 800-333-4436

A decision-support tool tailored to the needs of the **sales** manager. Provides special filters and report formats that allow the **sales** manager to track **sales** productivity or products, customers, or **sales** territories. The results of queries can be displayed as spreadsheet-like reports or as graphs...

...OLE. Reader service #202.

Xceed  
PowerCerv Corp., Tampa, FL  
813-226-2378

A contract-management, **sales** force automation system developed using PowerBuilder and PowerCerv's PowerTool Object Library and Development Methodology. Lets professional **sales** organizations proactively manage prospect and customer databases, capture and leverage valuable **sales** and marketing trend data, and improve **sales** rep productivity. Features include toolbar navigation, user-definable database, unlimited companies and contacts, event logging...

7/K/7 (Item 3 from file: 275) Links

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01775099 **Supplier Number: 16825876 (Use Format 7 Or 9 For FULL TEXT )**

**Understanding business objects: using basic building blocks to build better applications.**

McKie, Stewart

DBMS , v8 , n2 , p70(4)

Feb , 1995

ISSN: 1041-5173

**Language: ENGLISH Record Type: FULLTEXT; ABSTRACT**

**Word Count: 2522 Line Count: 00235**

**Abstract:** ...intangible, about a specific business process or function. Typical BO encapsulations could be opening a **trading session** or setting up an **ATM transaction**. BOs encompass granularity, which determines whether a function is component, container or composite; context, which...

...the "tangibles" and "intangibles" of business. Tangibles include paper-based information represented by **purchase** and **sales** orders, financial reports, telephone message slips, invoices, tickets, insurance policies, bank statements, and so on...

...the mission-critical aspects of a business. Processes might include order processing, reservations, purchasing, **ATM transactions**, manufacturing, quality control, and so forth, while relationships include employees, customers, vendors, passengers, and so...

...objects may also be built around events such as closing a fiscal year, ending a **trading day**, initiating an **ATM transaction**, or opening up a new flight for reservations. Note that whether the business object represents...

...that you expect to use within another business object (this idea is similar to the **traditional** programming concept of a subroutine). Component objects are not necessarily simple; rather, they may range...are discrete. They are not reused or encapsulated by others (such as an "end-of-trading-day" object). The more reuse and encapsulation to which a business object is subjected, the...

...business objects.

To illustrate this concept more clearly, let's look at examples of a **currency-conversion** object, a **table**-viewing object, and a purchase order object. You can use a **currency-conversion** object in...

...and it is designed for reuse. This object would contain the following variables: exchange rates, **trading** dates, currency output formats, input (source) currencies, and output (target) currencies.

A **currency-conversion** object...and it is designed for reuse. However, this object has more complex behavior than the **currency-conversion** object. **Table 2** categorizes this behavior from a

business perspective. This object is generic enough to stand...

...add-on class libraries, frameworks, standalone generic business objects, and complete application development environments. Many **third-party** components are also available for popular client/server development environments such as PowerBuilder and SQL...

...according to

	specific criteria
Alerting	Alerting specific individuals when certain events take place
Feeds	Generating <b>transaction</b> feeds to other tables if required
Output	Offering specialized output such as fax, EDI, or...

7/K/8 (Item 4 from file: 275) Links

Gale Group Computer DB(TM)

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01688449 **Supplier Number:** 15519537 (Use Format 7 Or 9 For FULL TEXT )

**A drill-down analysis of multidimensional databases. (includes related articles on guidelines for implementing multidimensional DBMSes and multidimensional DBMS use at three sites) (Enterprise Client/Server) (Buyers Guide)**

Frank, Maurice

DBMS , v7 , n8 , p60(7)

July , 1994

**Document Type:** Buyers Guide

ISSN: 1041-5173

**Language:** ENGLISH **Record Type:** FULLTEXT; ABSTRACT

**Word Count:** 4999 **Line Count:** 00418

Most new client/server OLTP (online **transaction** processing) applications use relational database management systems. They excel at rapidly gobbling up huge volumes...

...output (not input) to help users investigate patterns not easily revealed by long lists of **transactional** reports. Many different kinds of products provide varying degrees of this multidimensional functionality. (For a...

...1 (see page 66) illustrates multidimensional data as a cube.

The most common dimensions for **sales** databases include organizational charts down to the level of an individual **salesperson**, geographic locations of **sales** offices and customers, product lines, distribution channels, and so forth. Additional accounting and financial dimensions include measures such as units sold or dollar **sales** in actual or budgeted form. These base values feed into computed formulas yielding financial ratios...

...can store computed results as dimensions, but they may also calculate them on the fly.

**Sales** and marketing analysis is by far the most commonly demonstrated application for multidimensional analysis; budgeting...

...For example, a multilevel cross tab may have row headings for region, branch, office, and **salesperson**, and column headings for year, quarter, and month. Pivoting or rotating the axis, or the...

...introduction of Improv for Windows in November 1992 renewed interest in PC-based analysis beyond traditional spreadsheets. (Lotus originally released Improv for the NeXT computer two years earlier.) On the server...

...fast and flexible retrieval. They complement rather than compete with relational databases because they store **transactional** data not for record-keeping purposes, but rather for analytical transformations. They usually import data...which are usually sums, but can also be other

formulas. For example, gross margin equals **sales** minus cost of goods sold. Arbor supports simultaneous hierarchies, whereby a member can be a...

...altering the source data, by associating a currency code with each numeric measure. Essbase stores **currency conversion tables** separately.

Arbor's spreadsheet add-on appears as a new menu option. Users must first...

...suites of vertical market applications that they built using Express. DataServer is a group of **sales** and marketing applications for brand managers, **sales** managers, and similar users who analyze product introductions, promotions, competition, and so forth. The Financial...

...of data: summarized results stored in Multiway, freshly aggregated summaries retrieved from relational databases, and **transaction** detail records from the relational databases.

Besides multidimensional cross tabs, Acumate applications perform many kinds...

...analysis might show that four out of 20 products reap 80 percent of the total **sales** or profits, while another group of 10 products brings in a very small share ...for decision support. Red Brick Systems' namesake product, the Red Brick Warehouse, imports data from **transactional** databases and automatically summarizes it in as many ways as a designer wishes. It also...

...multidimensional server vendors provide them. I know of at least one case in which a **third-party** vendor supports another company's multidimensional engine. Comshare, another veteran EIS vendor, recently struck a...

...management along with analytical front ends in a single package.

If the idea of migrating **transactional** data into an alternate engine is too burdensome, you may want to evaluate end-user query tools that retrieve and analyze **transactional** data using multidimensional techniques. These products speak SQL to a relational server, and then transform...important.

Backup of multidimensional databases may seem at first to be less critical than for **transactional** systems because the data is more stable and can be recreated from operational systems. This...

...Accelerating Analysis

Relational databases have proved their worth for what they do best -- storing the **transactional** records of a company's business operations. But an architecture optimized for one major requirement...

...requirements as well. Multidimensional databases and analytical tools are becoming more popular because they augment **traditional** systems and compensate for some shortcomings. If your analytical efforts feel stifled by the limitations...

...those in which the data has several dimensions. MDDB tools are generally

not appropriate for transaction-processing systems or systems containing groups of unrelated data. For example, a system that contains **sales** and manufacturing information over a period of time is not appropriate for an MDDB if there is no way of relating the **sales** data to the manufacturing data, or if the data cannot be structured in increasing levels...present.

Another Research & Planning project is helping a pharmaceuticals firm refocus its analytical energies from **sales** to profits. This application is also written in Visual Basic with Acumate running on a...

7/K/9 (Item 5 from file: 275) Links

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01383223 **Supplier Number:** 09514967 (Use Format 7 Or 9 For FULL TEXT )

**Accountancy with a difference. (Software Review) (Systems Union's Sunaccount accounting software) (evaluation)**

Ward, Adele

DEC User , p79(2)

Sept , 1990

**Document Type:** evaluation

ISSN: 0263-6530

**Language:** ENGLISH **Record Type:** FULLTEXT; ABSTRACT

**Word Count:** 1700 **Line Count:** 00134

**Text:**

...is possible to query files, build reports, and import and export data to and from **third party** applications. If the company has its own data processing expertise, the system manager has the...

...export data both within the Sunsystems range and to and from other popular applications. The **transaction** level data from Sunaccount and Fixed Asset ledgers can be exported in a variety of...

...to a consolidation ledger. A similar technique lets the user keep separate ledgers for purchases, **sales**, project costing or fixed assets, which can be summarised into a general ledger. For organisations...

...approach. Users type 'LA' to enter ledger accounting. Normally it would be necessary to select **sales**, purchase or nominal ledger, but here it is possible to enter a **transaction** type such as 'S1' ( **sales** invoice) and the software can sort out the data. This makes the system particularly integrated...

...defines preset codes for each type of entry. This means that key information on the **sales** invoice will already be memorised. The percentage to be added for VAT, and the fact...

...Another unusual feature is the way Sunaccount handles budgets: these are simply treated as future **transactions**. The future **transactions** are stored in a separate file, structured in the same way as the actual **transaction** file, and the user only has to enter 'CB' (for change budgets) to swap between...are more advanced than in many competing packages, which often have little more than a **currency conversion table**. **Transactions** may be posted in as many currencies as required, even in the nominal ledger. Different...

...for profit and loss and balance sheet analysis reflect the changes in currency over the **trading** period and are generated in both foreign and base currency. Ageing debtor and creditor reports...

...currencies. The multicurrency features are comprehensive and among the strongest bonuses of this software.

The **currency conversion tables** can also be used for time recording and job costing, and the module which handles...

...pounds], Fixed Assets 4,000 [pounds], Multi Currency and Time Recording 4,500 [pounds], Sunbusiness **Sales** Invoicing 3,500 [pounds], **Sales** Order Processing 2,700 [pounds], Purchase Invoice Register 3,500 [pounds], Purchase Order Processing S...

7/K/10 (Item 6 from file: 275) Links

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01285843 **Supplier Number: 06964812 (Use Format 7 Or 9 For FULL TEXT )**

**Pound-wise accounting system right on the mark. (London-based Systems Union Ltd.'s microcomputer-based SunAccount Integrated Ledger Accounting System)**

Brennan, Peter J.

Wall Street Computer Review , v6 , n4 , p56(4)

Jan , 1989

ISSN: 0738-4343

**Language: ENGLISH Record Type: FULLTEXT; ABSTRACT**

**Word Count: 2232 Line Count: 00172**

**Abstract:** ...that allows the international business user to set up a chart of accounts, perform unlimited **transactions**, post to previous or future periods and handle 99 different periods and nine budgets. The... ...for the system was introduced by SunSystems in 1986 that adds the ability to perform **transactions** in any currency. Licenses for SunAccount range from \$3,500 to \$100,000. Usage of...

INTERNATIONAL **BROKERAGE** houses, banks, insurance companies or even large multinational corporations--with millions of dollars in cash...

...suits them. The user defines the chart of accounts. The system permits unlimited numbers of **transactions**, allows posting to prior and future periods (by authorized people), can manage up to 99...

...newer software contains all the features of the earlier one plus the ability to handle **transactions** in any currency. The system has no limit to the numbers of currencies it can handle. Central to the SunAccount multicurrency package are the **currency tables**, which maintain current **conversion** rates with associated **currency** codes. The **conversion** rate can be carried to 18 digits with up to nine decimal place.

Need for...

...that big, rounding to six decimal places makes a difference." The system may carry the **transactions** to such infinitesimal lengths, but it reports them in the standard format of the currency...

...users of SunAccount. The New York office has only eight people. Its main business is **trade** financing, letters of credit, asset financing, and the foreign exchange **trading** that supports it. Multiple currency **transactions** are routine.

"The system is very simple," says Nowlin. "Our base currency here, naturally, is the U.S. dollar. We can enter our **transactions** in any of the eight currencies in which we deal, and all the associated accounts and enter it manually for a particular **transaction**."

Creditcorp International's New York office got the system on the recommendation of the company...

...did the basic research into a suitable multicurrency accounting system. The two offices do not **trade** information electronically, though they could.

Accounting, British Style

In London, two other firms run the...

...S. Treasury issues. "Tokyo and London have only just agreed on how to handle gilts. **Trading** them may involve multicurrency **transactions** for which the SunAccount system will be very useful."

Neatherway has high praise for the...

...such as separate travel accounts and budgets for staff in various countries.

One can track **sales** and purchases, inventory control, handle invoicing, write checks, correct data for prior dates and project...  
...by currency, aged debtor analysis, debtor statements, company profit and loss, balance sheet, expense analysis, **sales** by branch and division, and more.

Not all these functions are common to all PC...

**Descriptors:**

...**Brokerage** Industry

7/K/11 (Item 7 from file: 275) [Links](#)

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01252241 **Supplier Number: 06874839 (Use Format 7 Or 9 For FULL TEXT )**

**Tool maker streamlines global data entry. (Connectivity section)**

Stoll, Marilyn

PC Week , v5 , n29 , pC15(1)

July 18 , 1988

ISSN: 0740-1604

**Language: ENGLISH Record Type: FULLTEXT; ABSTRACT**

**Word Count: 642 Line Count: 00052**

**Abstract:** ...days of its international financial reporting cycle by implementing a network that linked its manufacturing, **sales**, and distribution sites with the mainframe computer at its New Britain CT headquarters. For the... ...from Orion Micro Systems called fdc-Pyramid. Stanley plans to replace the General Electric network **intermediary** with Infonet, a worldwide packet-switching network that will allow transmissions to the corporate mainframe...

...to shave 30 days from its international financial reporting cycle by electronically linking 27 manufacturing, **sales** and distribution sites in 15 countries over the General Electric Information Services (GEIS) network.

In...

...data for consistency (making sure debits equal credits, for example) before transmission. Using built-in **currency-conversion tables**, the software handles the conversion to U.S. dollars at each remote site.

At the end of each month, remote...

...from GEIS to Stanley's mainframe.

Stanley's next step is to eliminate the GEIS **middleman**, Mr. Gustafson said. In its place, the company plans to use Infonet, a worldwide, packet...

...of El Segundo, Calif.

With Infonet, data will no longer be collected in a mailboxlike, **third-party** repository. Each remote site will be able to log directly on to Stanley's IBM...

7/K/12 (Item 1 from file: 636) [Links](#)

Gale Group Newsletter DB(TM)

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01761209 Supplier Number: 42915714 (USE FORMAT 7 FOR FULLTEXT)

**'MASS' BEING STRIPPED AWAY FROM MASS MEDIA, SIKES TELLS NAB**

Communications Daily, v 12, n 73, p N/A

April 15, 1992

**Language:** English **Record Type:** Fulltext

**Document Type:** Newsletter; Trade

**Word Count:** 1430

**(USE FORMAT 7 FOR FULLTEXT)**

**Text:**

LAS VEGAS -- FCC Chmn. Sikes took theme of "broadcasting in the year 2001" in **traditional** NAB convention speech here Tues. "Today," he said, "many broadcasters seem back on their heels..."

New markets in communications "are sprouting like mushrooms," Sikes said, and **traditional** markets are "being radically redefined." What is needed, he said, is "imagination, innovation and adaption..."

...changes its own habits begrudgingly" and "tends to act on yesterday's record." He said **traditional** recipe for success also is changing: "Today's TV broadcasters have been accustomed to reconciling..."

...me, Mr. President," and attempted to take over microphone before being grabbed by Secret Service **agents** and hustled off stage. Reagan immediately returned to microphone and finished his speech before shocked...

...terms undisclosed. But Mktg. Mgr. Steven Schupak told us that he has been making additional **sales** on convention floor and quoted Cap/ABC shopper as saying that system is "the best...leases. (2) Comsat bulletin board, operations mailbox that permits direct contact with Comsat personnel. (3) **Currency conversion table**.

PanAmSat was touting service on its follow-on PAS-2, -3 and -4 satellites, set...

...content. Other hot legislative area will be local marketing agreements (LMAs). Leach called such time **brokering** as "subterfuge" that in some cases amounts to de facto transfer of control. Reid praised...

7/K/13 (Item 1 from file: 16) Links

Gale Group PROMT(R)

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09926014 Supplier Number: 89020041 (USE FORMAT 7 FOR FULLTEXT)

**Kym Corrin's Interglobal : Linking a Global Alliance.**

Orton, Charles Wesley

Response TV , v 10 , n 9 , p 28

June , 2002

**Language:** English **Record Type:** Fulltext

**Document Type:** Magazine/Journal ; Trade

**Word Count:** 2721

...her network. "In those days, the way to recruit customers was to recruit customers as **agents**," she says. Thus, an interlocking network of customers and **agents** was created.

Then Corrin saw a cleaning product similar to one of hers advertised as...

...that model, marginal products became unsuccessful, but they'd be successful if there was no **middleman** in the equation," Corrin says.

She also noticed that the old 80-20 rule operated...he used for analyzing his business."

Weihofen's infrastructure was also different, not the classical **sales**-marketing-media structure, but a more lenient one, allowing flexibility and quick action.

Weihofen became...

...says. "They're looking for quality, rather than quantity. They get the quantity in the **sales** volume, which speaks for itself. The potential for product **sales** through Global Alliance is 4 to 5 million units a year."

Low Overhead, High Profit...

...on purpose, but they're all very qualified young ladies from legal backgrounds, marketing backgrounds, **sales** backgrounds."

Ability, however, is only one factor Corrin looks for in the people who work...example, when currency conversion was applied. But consumers seldom knew that.

There was an official **conversion table** for each **currency**, converting x francs to 1 euro, y deutschmarks to 1 euro, and so on. So...

7/K/14 (Item 2 from file: 16) Links

Gale Group PROMT(R)

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04536535 Supplier Number: 46665825 (USE FORMAT 7 FOR FULLTEXT)

**Currency Converter Positions for E-Cash**

Wall Street & Technology , p 62

Sept , 1996

**Language:** English **Record Type:** Fulltext

**Document Type:** Magazine/Journal ; Trade

**Word Count:** 748

...Associates A.G., a Zurich-based developer of foreign exchange forecasting models and other sophisticated **trading** and risk management models, opened its newly designed web site [www.olsen.ch]. It offers everything from a **currency conversion table** to research on foreign exchange markets, a prototype of risk data from J.P. Morgan...

...links to related sites-such as the Amsterdam Stock Exchange, Charles Schwab and FX Internet **brokers**.

Still, the most popular page is the currency converter, which offers rates--every five minutes...

...The customer would know how much he's going to pay at the point of **sale**. "As a merchant, you display what you accept in various local currencies, but you don...

...says Graber.

E-Cash will also play a big role in "micro payments," which include **transactions** from a penny to \$10, says Graber. "Initially people are going to adopt it slowly..."

...predicts. This is where credit cards really can't offer a good alternative. "Credit card **transactions** are too expensive for doing small amounts." For instance, O&A could charge someone 40...

7/K/15 (Item 1 from file: 148) Links

Gale Group Trade & Industry DB

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13395728 **Supplier Number:** 69806625 (USE FORMAT 7 OR 9 FOR FULL TEXT )

**Free-Standing Companies in the Oil Sector in Romania and Poland before 1948: Typologies and Competencies.**

STANCIU, LAURA

Business History , 42 , 4 , 27

Oct , 2000

ISSN: 0007-6791

**Language:** English

**Record Type:** Fulltext

**Word Count:** 16654 **Line Count:** 01361

...banking and merchant houses, where different firms often 'clustered' around various interest groups, engaged in **transactions** with one another ...types of free-standing firms while analysing the British capital exports in imperial Russia: the '**intermediary**' and the '**core**' free-standing companies. (19) The '**intermediary**' free-standing company was 'searching for suitable concessions in the Russian Empire'. Afterwards the '**intermediary**' would sell those concessions to 'a "**core**" British free-standing company, thus aborting any further...

...took over Steaua Romana SA from its previous Austro-Hungarian owners (the Hungarian Industrial and **Trade** Bank, Budapest and the Wienner Bankverein). Under its careful management Steaua Romana became the largest ...wholly-owned British company in Romania. ( 47) The Oilfields Finance Corporation Ltd played the (financial) '**intermediary**' role: it was floated on the London capital market to provide the financial means necessary...

...far three main types of free-standing companies have been introduced: the '**early**', the '**financial intermediary**' and the '**core**' firms. They played distinct roles within the loosely linked groups of free...

...figure in the context of British FDI in Romanian oil. The links between RCOL, its '**intermediary**' and '**early**' free-standing companies confirm the structure introduced above, which seems to epitomise the...

...accountant. The PO&T board of directors was enlarged with new members representing either the **intermediary** companies (such as the Petroleum Industrial Trust Co. Ltd), or the acquired firms (for example... d.d.) to carry out exports in the respective markets:

(by 1923) the PO&T **Trading** Department was a very complete organisation, regular shipments being made to England and all parts...

...subsidiary, the Phoenix Oil Products Co. Ltd (PO&P), to be its sole

and exclusive sale agent for the group's oil products in Europe. The PO&P and PO&T had...markets distinguished CGP from its production-minded British counterpart.

In the French case, the 'financial' **intermediary** seemed to have played a more important role than in the case of PO&T...

...such resources, and CGP was one of them. CGP acted, in fact, as a 'financial **intermediary**' free-standing company: through exchange of shares, CGP managed to control many of the 'early...

...financial resources to support the enlargement of its group. The relationship between this financial **intermediary** and its core business was not unique for the French oil business. Similar links developed between other companies, such as Ste. Financiere des Petroles (SFP, the 'intermediary') and Ste. Francaise des Petroles Premier (Premier, the 'core'). The 'financial **intermediary**'/'core'/'early' free-standing companies type of relations are represented schematically in Figure 8. They...36m (ff. 375m). (102) This was a unique case of a merger between a 'financial **intermediary**' and its main 'core' free-standing company, which reflects the strength and resilience of the...  
...and, prior to that, by the increased economic and political domination of Nazi Germany. Barter **transactions** between Germany and east-central European countries assumed considerable importance in the late 1930s, 'not...

...a market for imports of oil and foodstuffs from eastern Europe, France and the UK **traded** increasingly with their colonies and ignored the economic problems of the region in spite of...

...Deutsche Bank, became a major oil producer in Romania. (107) The east-central European oil **trade** followed the course of military and political events and put an end to long-established...standing companies in the Romanian and Polish oil industry can be classified as 'early', 'financial **intermediary**' and 'core' firms. It has been argued that the complex functional, operational (managerial) and financial...of several existing free-standing companies, such acquisitions being facilitated by the work of several **intermediary** firms. It also became clear that 'financial intermediaries' had played a different role in different...

...Malopolska and Premier. It was also shown that the role played by the financial **intermediary** had important implications in the long run. The French group, for example, became preoccupied with...

...strategy regarding Romanian oil.

As in all case studies, the question of generality arises. The **transaction cost** approach of Hennart predicted that free-standing companies, as institutional alternatives to capital markets...History, Vol.36 No.4 (1994), pp.118-31; idem, 'International Financial Capital Transfers: A Transaction Cost Framework', Business History, Vol.36 (1994), pp.51-69; and idem, 'Transaction-Cost Theory and the Free-Standing Firm', in Wilkins and Schroter (eds.), Free-Standing Company...

...Enterprises in Britain (Cambridge, 1992); G. Jones and J. Wale, 'Merchants as Business Groups: British Trading Companies in Asia before 1945', *Business History Review*, Vol. 72 No.3 (1998).

(17.) G...

...33. All values are calculated based on the exchange rates provided by R.L. Bidwell, *Currency Conversion Tables: A Hundred Years of Change* (London, 1975).

(25.) Pearton, Oil, p.68.

(26.) Pearton, Oil...

...group was created in 1907 as a result of a merger between the British Shell **Trading** and Transport Company and the Dutch Royal Dutch on a 40-60 per cent basis...coal. The French commercial attache in Poland was enthusiastic about the 'unlimited' possibilities for bilateral **trade**, enhanced as they were by the depreciated local currency. CARAN, F12/9265, Pologne. Renseignements fournis...that its shareholders do not consent with the industrial corporation.

(116.) J.F. Hennart, 'The **Transaction Cost Theory** of Multinational Enterprise', in C.N. Pitelis and R. Sugden (eds.), *The Nature*

...

7/K/16 (Item 2 from file: 148) [Links](#)

Gale Group Trade & Industry DB

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10243486 **Supplier Number:** 20766441 (USE FORMAT 7 OR 9 FOR FULL TEXT )

**Are you prepared for the Euro? (interview with Prestige Software International Senior VP Laura Hills)(includes related articles)(Interview)**

Williams, Kathy

Management Accounting (USA) , v79 , n11 , p58(4)

May , 1998

**Document Type:** Interview

ISSN: 0025-1690

**Language:** English

**Record Type:** Fulltext; Abstract

**Word Count:** 4053 **Line Count:** 00315

**Abstract:** ...of the new single currency in Europe. She predicts that the euro would expand intercountry **trade**, increase competition levels and make the operations of treasury firms in the region much simpler...

...European Union, such as the French franc and Italian lira, for all business and consumer **transactions**. In many respects, while it will be just another currency, for the first time this...

...is being created through the EMU, or European Monetary Union, efforts.

This means that intercountry **trade** is expected to increase significantly with the same ease as business is **transacted**, say, by American parties from New York to Los Angeles. We Americans can **transact** business and purchase goods with the same currency from New York to New Jersey or...

...to California. That's not the case in Europe yet.

Another speculation is that European **trade** will become much more competitive and that with only one currency to contend with, the...

...year period, there's a requirement called "no compulsion, no prohibition," which means that economic **agents** will have to deal in euro and national currency during the transition period. Debts may... ledger. Companies may be used to dealing with multiple currencies, but they generally use a **conversion rate table** to go from one currency to the other and back. They look at today's rates, say the French franc against the Italian lira, which is **trading** at X rate today, and they generally apply some sort of conversion rate to compare... ...multinational and one that's doing business with European suppliers or that has offices or **trading** partners there, then I would suspect, regardless of where home office is, you will be...

...just breaking into the global marketplace?

It would depend to what extent they intend to **transact** their

business overseas. If they're just receiving goods from a supplier in Europe, then their interactions with **trading** partners or customers or suppliers cross any of the Member State boundaries, then it might...

...t go to a store and use the euro as negotiable currency next year. All **transactions** are happening business to business and therefore from accounting ledger to accounting ledger.

Q: What...

...this create for software vendors?

One significant business issue keeps coming up in the software **sales** process - the speed of implementation. We have constantly been asked, "Say a company decides to..."

...process? Do you own it as a vendor, or do you outsource it to a **third party**? If something goes wrong or we're having trouble during this period, who do I go to? Do I go back to the **third party**, or do I go back to you?"

Q: Is there going to be an actual...

...basda.org. BASDA, the Business & Accounting Software Developers Association is a U.K.-based international **trade** association representing 200 of the leading international developers and suppliers of business and accounting software...

7/K/17 (Item 3 from file: 148) Links

Gale Group Trade & Industry DB

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09444353 **Supplier Number:** 19343664 (USE FORMAT 7 OR 9 FOR FULL TEXT )

**High stakes databases. (five top database vendors)(includes related article on ECOlogic's focus on Illustra's DataBlade technology) (Company Business and Marketing)(Cover Story)**

**Doyle, T.C.**

VARbusiness , v13 , n6 , p66(7)

April 15 , 1997

**Document Type:** Cover Story

ISSN: 0894-5802

**Language:** English

**Record Type:** Fulltext; Abstract

**Word Count:** 3661 **Line Count:** 00300

...But focusing on IUS has cost Informix. In early April, the company said first quarter **sales** were way off. The culprit: a change in strategy to emphasize IUS.

To get to...built makes more sense than alternatives. It does make his company dependent on Informix and **third-party** DataBlade developers, but, so far, that hasn't been a problem. DataBlade developers such as...

...partners that specialize in high-growth areas such as entertainment. Support is also building among **traditional** ISVs. Baan, for one, decided to name Informix as its default Unix database. New interest...

...period.

Despite its professed love for partners, Informix has quietly begun building a sizable direct **sales** force. Like Oracle, Informix has identified named accounts that it wants to pursue on its...

...insurance, retail, government, health care, energy and transportation.

According to Informix, members of its direct **sales** force won't pursue geographic territories or small customers. But VARs aren't stupid. "We..."

...to Informix," says one VAR being recruited by Informix. The bottom line with the direct **sales** force is that it is growing as fast as any other group at Informix. Furthermore...to Informix DataBlades, IBM only recently recognized the need to create a formal program for **third-party** Extender developers. Prior to that, it preferred to develop its own Extenders or partner with...

...single API to zero in on, for example.

Oracle hopes to build a legion of **third-party** cartridge developers and has created an object-oriented development environment called "Sedona" to help third...

...client tier. This will still give third parties a single API to write to, plus **transaction** and indexing support, and only one copy of their data to manage. The API, known...sell directly to end users or even to Informix's new and rapidly expanding direct **sales** force.

At least at this juncture, Keeler's DataBlade consultancy is willing to give the Informix direct **sales** force the benefit of the doubt. Direct **sales** reps for Informix, Keeler figures, will help take his technology into new accounts, much like his own **sales** force is taking DataBlades developed by third parties into new places.

Although encouraged by the...

...it was getting."

"Market Opportunities for Universal Servers"

Market: Financial/Insurance

Opportunity: Derivative calculation, actuarial **tables**, **currency conversion**, quantitative model scaling

Market: Manufacturing

Opportunity: Bill of materials explosion, economic order quantity computation

Market...

...document management

Market: Data warehouses

Opportunity: Aggregates, time series, business model-based data mining

Market: **Sales** and Marketing

Opportunity: Geographical, spatial and demographic data, customized multimedia demos

Market: Security

Opportunity: Monitoring...

...than others; similar architecture to IUS; new Extender emphasis; strong in key verticals

Cons: Fewer **third-party** Extenders; IBM's stealth marketing; no mainframe version yet

Vendor: Informix

Product: IUS

Pros: Great **third-party** ISV and VAR support for DataBlades; so far not crashing

Cons: No NT version yet; direct **sales** force worrisome

Vendor: Microsoft

Product: SQL Server and Universal Access

Pros: Improved scalability; active data...

7/K/18 (Item 4 from file: 148) Links

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03674465 **Supplier Number:** 06542726 (USE FORMAT 7 OR 9 FOR FULL TEXT )

**Computer reservations systems plunge into the PC era. (personal computers) (includes related article on manufacturers of airline automation systems)**

Henderson, Danna K.

Air Transport World , v25 , n8 , p47(6)

Aug , 1988

ISSN: 0002-2543

**Language:** ENGLISH

**Record Type:** FULLTEXT

**Word Count:** 4488 **Line Count:** 00354

...when U.S. airlines, recognizing the value of making their booking systems available to travel **agents**, attempted to establish an industrywide reservations system. When that effort failed, United in 1975 installed Apollo in the offices of a few select **agents**, but Sabre quickly leap-frogged its competitor with an aggressive development and marketing effort and...

...from old-line vendors like Telex and Unisys as well as IBM.

For the travel **agent**, the new intelligent workstation consolidates in a single device the capabilities that previously required a ...

...vendors is taking advantage of the PC's capabilities by developing a family of travel **agent** products that provide vastly better information while allowing **agents** to use plain language instead of strings of encrypted entries to make bookings. Keystrokes are reduced 80-90%, **transactions** are speeded, and training is simplified. The systems integrate reservations functions with a variety of **sales** and service tools, back office accounting and management functions.

The vendors also provide on their...

...keystroke, a wealth of useful information like current weather in all major cities, time zone **tables**, **currency conversions**, information on visas and other travel requirements, airport parking rates, inflight movie schedules--just about...point, for example. Fares and their associated rules can be displayed in another window and **agents** can search for such items as lowest fare, lowest available fare, or lowest unrestricted fare...

...trip time to make sure no lower fare has become available). In another window, the **agent** can book hotel rooms or car rentals.

Client profiles containing travel policies and procedures, along...

...automatically to back room accounting systems and various reports can be generated. With some systems, **agents** can also call up standard

office programs like work processing or spreadsheets, or convenience tools like notepads and calculators.

Most systems offer variations on an "easy reservations" theme wherein **agents** can simply follow menu commands or a script or can fill in blanks to create...

...travel arrangements (which are checked automatically against corporate policies), send the information to their ticket **agent**, and receive their tickets and travel documents by hand delivery or on a satellite ticket...

...look at flight schedules and fares and make their own reservations. Programmable function keys allow **agents** to tailor systems to their own liking.

The CRS vendors also are scrambling to offer...

...meanwhile, was the first into the market with a video brochure product, DeltaStarView, with which **agents** can call up information and pictures on hotels, destinations, tours and such, and display them...

...early in 1989. Drawing on Murdoch's massive hotel data base, Jaguar will allow travel **agents** to book hotel space and also will show travelers what they are buying and where...

...Rader says "most of our efforts are focused on bringing in new accounts."

DeltaStarRes gives **agents** access to airlines and other travel providers to make reservations and issue tickets. Tied to...

...standard PC programs. Also still to come are an Easy Reservations feature that will allow **agents** to create a basic PNR using menu choices and prompts, a desktop publishing system, and...for Focalpoint is its Scriptwriter feature, which allows travel agencies to write their own customized **sales** scripts for selling travel and creating PNRs, rather than being confined to menu or fill...

...can tie in to Travelscreen to monitor policy compliance. Focalpoint uses Microsoft Windows to allow **agents** to work with four data bases simultaneously on separate parts of the screen.

Having learned some lessons from competitors, Covia is enhancing Focalpoint by reactivating programmable function keys and giving **agents** the capability to use their own software as well as that supplied by Covia. Also...

...an electronic telephone messaging and mail package. Coming this month is Intuitive Sabre, with which **agents** can generate PNRs in plain language on preprogrammed screens. Planned in the future are desktop publishing and "provision to the travel **agents** of capability to develop unique products of their own."

"Old" products in addition to ADS...

...like hotels.

SystemOne's claim to fame is its Direct Access system with which travel **agents** can obtain schedule and seat availability information directly from the mainframes of participating carriers. When...it wants to

give up its Unix-based OMS, which is used both by travel **agents** and Pars itself. Unix, developed by AT&T, is acknowledged to be far superior for...

...in the fourth quarter is a T&E system that will be offered through travel **agents**.

Since an estimated 95% of the 30,000 travel agencies in the U.S. are

...

...most advanced res terminal, the largest data base and the greatest number of products for **sale**, has been eroded. "We allowed ourselves to get caught by the competition to some extent..."

...airline business itself, and most are now looking beyond their distribution activities and products to **sales** of byproducts of their massive computer systems to bolster the revenues they receive from booking

...

...sells systems allowing shippers to use Freight Sabre; AMR Technical Training, which provides training in **transaction** processing and telecommunications; newly formed AMR General Computing and Networking Services, which markets computer and...most of the new products for travel agencies, Covia/Apollo's new Focalpoint allows an **agent** to work in several windows on the screen at the same time.

PHOTO : CRS vendors...

...Tulsa, Okla.

PHOTO : The IBM PS/2 is the new standard intelligent workstation for travel **agent** locations.

**Descriptors:**

...Travel **agents**--

7/K/19 (Item 1 from file: 20) Links

Dialog Global Reporter

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**07117265 (USE FORMAT 7 OR 9 FOR FULLTEXT)**

**CANADA: AIRPORT BAGGAGE HANDLING EQUIP MARKET (1)**

## INDUSTRY SECTOR ANALYSIS

July 03, 1999

**Journal Code: FISA Language: English Record Type: FULLTEXT**

**Word Count: 3801**

**(USE FORMAT 7 OR 9 FOR FULLTEXT)**

...and Statistics Canada.

Apparent discrepancies in growth rate percentages and dollar values between the two **tables** result from **currency conversions**. Due to exchange rate fluctuations, the overall annual growth rate will appear to differ when...

...Market is calculated as the sum of the Imports and Local Production, minus Exports.

Best **sales** prospects

The following products, with their corresponding Harmonized System (H.S.) Codes, are expected to represent best **sales** prospects in the Canadian market for U.S. exporters.

H.S. CODES PRODUCT DESCRIPTION

8427...

...American manufacturers have an edge in pricing and servicing. Under NAFTA, the North American Free **Trade** Agreement, U.S. manufacturers have a slight advantage over their third country competitors, since no...  
...a wide range of high quality equipment utilizing the latest technology. With continuous promotion of **trade** between the two countries, U.S. manufacturers will continue to dominate the Canadian market.

C...five percent is sold to courier companies and the military. The majority of these latter **sales** fall into the categories of scales, x-ray equipment, and conveyor belts.

Future

In the...

...all custom forms are properly completed. Suppliers from the United States can also improve their **sales** support service by improving communications with Canadian customers' own customs **brokers** and liaison representatives, many of whom can facilitate the customs process. (Customs **brokers** process approximately 70 percent of Canada's imports.) Making an extra effort to see that...

...it is common practice for manufacturers to present their product literature to potential customers. Purchasing **agents** for airports also actively search for product suppliers. Ensuring that product literature is readily available...

...an important part of an effective approach to the Canadian marketplace.

Airport and airline purchasing **agents** often source new products or announce expansion efforts in industry publications. Current information or development...

...of the baggage handling equipment such as conveyor belts, carts, tractors and belt loaders. Canadian **agents** and distributors are generally experts on the equipment and products they sell. Frequently, they cater...

...products sold in Canada and is calculated on a value-added basis at each re-sale level. Canadian importers must now remit seven percent of the duty-paid value of their...

? d s  
Set Items Description  
S1 0 S TABLE (W) CURRENCY (W) CODE  
S2 13142899 S TABLE (3N) CURREN?? OR MONEY? OR CASH?  
S3 150 S CURRENCY? (N3) CONVERSION? (N2) TABLE?  
S4 8069431 S BROKER? OR AGENT? OR INTERMEDIARY? OR (THIRD OR 3RD) () PARTY OR MIDDLEMAN OR  
MIDDLEMEN  
S5 34714060 S TRANSACT? OR SALE? OR TRAD? OR DUTCHACTION? OR METAAUCTION?  
S6 22 S S3 AND S4 AND S5  
S7 19 RD (unique items)

? b 474,475,99, 256, 348, 349, 347, 625, 637, 169, 268, 626, 267, 139, 608

2/9/56 (Item 1 from file: 608) Links

KR/T Bus.News.

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640625      **Story Number: 9584 (THIS IS THE FULLTEXT)**

**THE FLORIDA TIMES-UNION, JACKSONVILLE, WEB WATCH COLUMN**

Ed Stansel Jr.

Florida Times-Union

Mar 26, 1998 08:00 E.T.

**Document Type:** Newspaper   **Record Type:** Fulltext   **Language:** English

**Word Count:** 0293

**Text:**

Mar. 26--Online golf: If The Players Championship has given you golf fever but you're too busy to hit the links, swing over to the Pretty Good Golf game on GolfWeb's site. Choose your skill level and pick from among 11 different courses, real and imagined (sorry, Sawgrass isn't included). You'll need to download the free Shockwave plug-in for your Web browser, available from a link here.

<http://services.golfweb.com/gamecenter/pgg/>

Music festival: Non-golfers looking to get away from the TPC madness might consider a trip to Live Oak this weekend, where a celebration of acoustic folk, bluegrass, blues and Celtic music is set for the Spirit of the Suwannee Music Park. For information about the festival and the park, see this Web site.

<http://www.musicliveshere.com>

Foreign exchange: Planning a trip abroad? See how far your dollar will go using Olsen & Associates' online **currency conversion tables**. The interactive chart lets you look up foreign exchange rates for 164 countries, including historical data going back to 1990. Print out a wallet-sized currency "cheat sheet" to help you quickly spot bargains or rip-offs. "Quite an interesting site whether or not you are planning any travel," says Web watcher Bruce Alexander.

<http://www.oanda.com>

(c) 1998, The Florida Times-Union. Distributed by Knight Ridder/Tribune Business News. -----

**Company Names:** Florida Times Union ; Knight Ridder/Tribune Business News ; Olsen & Associates

**Descriptors:** Online and Internet

/9/50 (Item 8 from file: 347) [Links](#)

JAPIO

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03605296 \*\*Image available\*\*

## **PREPAID CARD AND PREPAID CARD SETTLING MACHINE**

**Pub. No.:** 03-268196 [JP 3268196 A ]

**Published:** November 28, 1991 (19911128)

**Inventor:** SONE MASAHIRO

**Applicant:** FUJITSU LTD [000522] (A Japanese Company or Corporation), JP (Japan)

**Application No.:** 02-068713 [JP 9068713]

**Filed:** March 19, 1990 (19900319)

**International Class:** [ 5 ] G07F-007/08; G06K-017/00; G06K-019/00

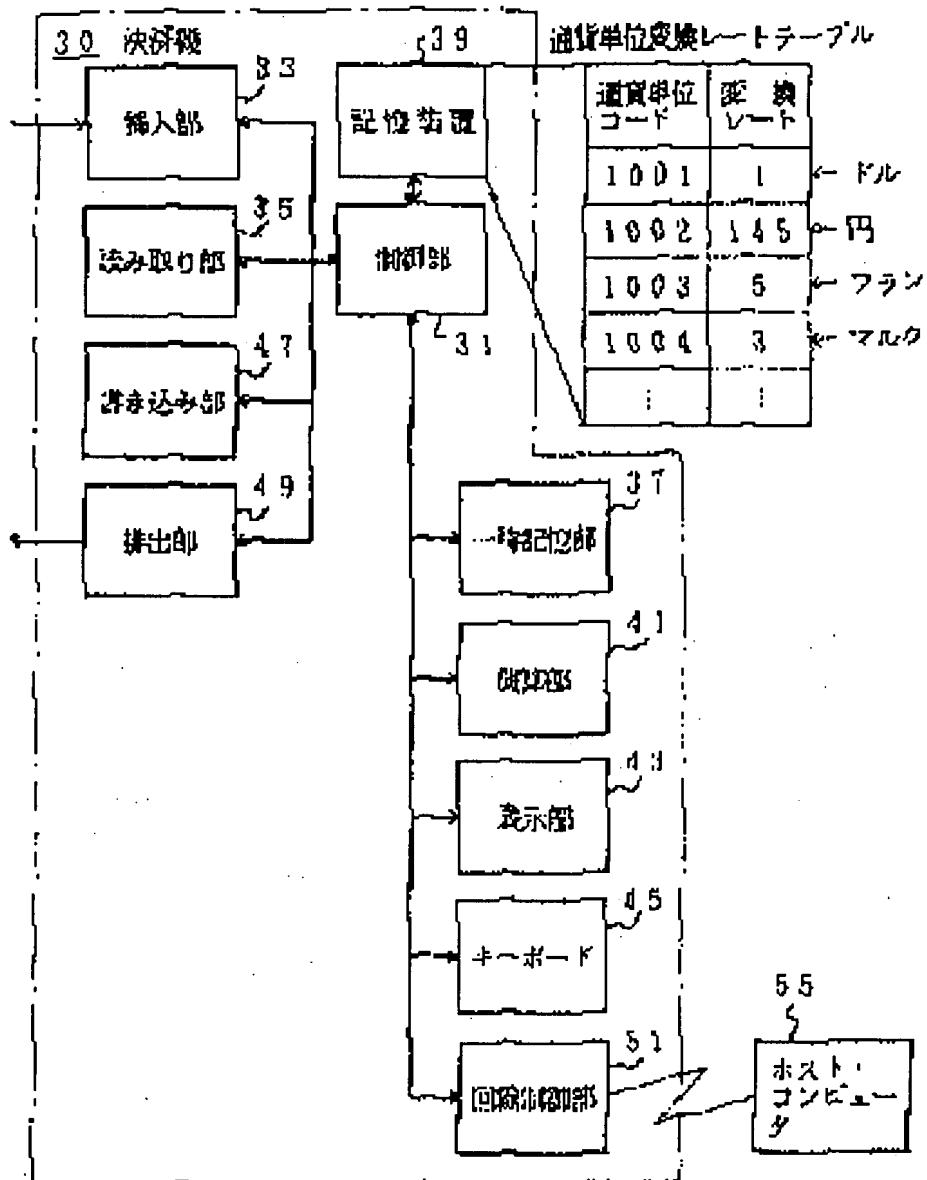
**JAPIO Class:** 29.4 (PRECISION INSTRUMENTS -- Business Machines); 45.3 (INFORMATION PROCESSING -- Input Output Units)

**Journal:** Section: P, Section No. 1318, Vol. 16, No. 80, Pg. 98, February 26, 1992 (19920226)

### **ABSTRACT**

**PURPOSE:** To make it possible to use a prepaid card in plural countries having respectively different currency units by providing the prepaid card with amount currency unit information and providing a prepaid card settling machine with a function for finding the conversion rate of corresponding currency units.

**CONSTITUTION:** The prepaid card settling machine 30 processes inputted values by deciding the currency unit of all of the input values is 'dollar' and a code number corresponds to a currency unit 'yen'. A reading part 35 reads out the identification(ID) number of an issued person, an amount and the code number to be currency unit information from a prepaid card inserted from an insertion part 33. A control part 31 retrieves a **currency unit conversion rate table** by using the code number as a key and extracts a code number conversion rate. When an amount asked is inputted from a keyboard 45, a computing part 41 converts the inputted amount asked into the currency unit 'yen' recorded in the prepaid card.



2/9/35 (Item 21 from file: 349) [Links](#)

PCT FULLTEXT

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00548213

**SYSTEM AND METHOD FOR SYSTEM TO SYSTEM CREDIT INFORMATION TRANSMISSION**  
**SYSTEME ET PROCEDE PERMETTANT DE TRANSMETTRE DES INFORMATIONS DE CREDIT DE**  
**SYSTEME A SYSTEME**

**Patent Applicant/Patent Assignee:**

- **EQUIFAX INC;**  
;;

	<b>Country</b>	<b>Number</b>	<b>Kind</b>	<b>Date</b>
Patent	WO	200011586	A1	20000302
Application	WO	99US18725		19990819
Priorities	US	9897329		19980820
	US	99376294		19990818

**Designated States:** (All protection types applied unless otherwise stated - for applications 2004+)

**Main International Patent Classes (Version 7):**

<b>IPC</b>	<b>Level</b>
G06F-017/60	Main
G06F-017/30	
G06G-007/52	

Publication Language: English

Filing Language:

Fulltext word count: 15007

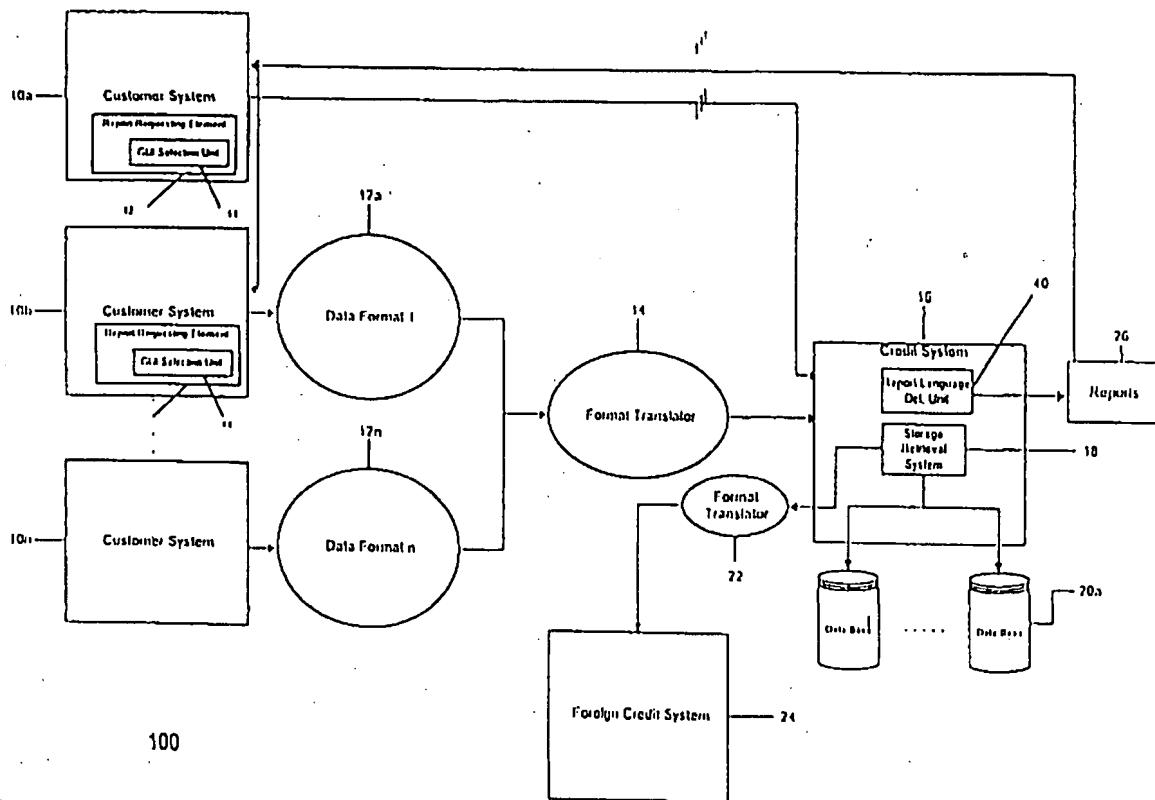
**English Abstract:**

The invention relates to a credit updating system (16) which permits credit files stored in different formats, and possibly in different countries, to be seamlessly exchanged and updated without conversion on the end users' part. A central credit repository (20) stores credit information in a universal format, such as the ICCIF format formulated by Equifax, In., but contains an interpreter module (40) to accept and map data from idiosyncratic foreign credit systems (24) to that database. The client (10a) of the credit system, such as banks issuing credit cards, can specify language, currency denomination, exchange rate and other information according to their needs. System-to-system credit file updating is enhanced.

**French Abstract:**

L'invention concerne un systeme de mise a jour (16) de credit, permettant d'echanger et de mettre a jour, de maniere continue, des fichiers de credits memorises dans differents formats et eventuellement dans differents pays, sans conversion de la part de l'utilisateur final. Une centrale d'informations (20) de credit memorise des informations de credit dans un format universel, tel que le format ICCIF formule par Equifax, In., et contient un module interprete

(40) destine a accepter et mettre en correspondance des donnees des systemes de credit (24) etrangers idiosyncrasiques avec une base de donnees. Le client (10a) du systeme de credit, tel des banques emettant des cartes de credit, peut specifier une langue, une monnaie, un taux de change et d'autres informations en fonction de ses besoins. La mise a jour d'un fichier de credit de systeme a systeme est ameliorée.,



### **Detailed Description:**

# SYSTEM AND METHOD FOR SYSTEM TO SYSTEM CREDIT INFORMATION TRANSMISSION

## Field of the invention

The invention relates to consumer and commercial credit transaction database systems.

## Background of the Invention

In the credit industry, credit issuers need to know the credit history of potential credit recipients, including both consumers and commercial entities.

Before issuing credit to a potential new account holder of any type, credit issuers such as banks, department stores, and realty companies typically request information about the history of that potential new account holder's existing

accounts. Accordingly, there are automated systems that collect business or personal credit history information and release that information to credit issuers when appropriately requested.

These credit reporting systems typically operate as follows. Customers of the credit reporting system (that is, credit grantors) submit information about their account holders to a repository, including consumers and commercial enterprises. As an example, Bank Z, along with other credit issuers, reports current account information for all of its credit account holders including their name, current address, balance and payment history, among other information, to a credit reporting repository which is often a central computerized database.

That credit reporting system collects account information from the variety of credit issuers associated with the system, including Bank Z, and records that information in a database.

Then, under appropriate circumstances, other credit issuers, consumers or others may request credit history information for a particular consumer or commercial enterprise from the records of the credit reporting system. For instance in the United States that request may be by a bank considering a consumer for a new credit card account. The credit reporting system then generates a report which lists information from various accounts with all credit issuers that are stored in the database for that particular consumer or commercial enterprise. Credit issuers may use that reported information to assess whether to issue credit by using various modeling and scoring algorithms to assess the risk involved in granting the credit.

The credit information recorded by the various collection systems used throughout the world varies from country to country, and even within a single country. For example, information collected in India may vary significantly from information collected in Mexico or the United States. Languages, cultures, and currencies differ in these various countries, and accordingly the types of information collected by credit systems used in these countries also varies. Accordingly, a credit reporting system designed for one reporting format is not capable of accepting information from a customer that provides 15 information in another format. A uniform reporting system does not exist, and more flexible and universal information access is desirable.

#### **Sununga of the Invention**

An object of the invention is to overcome these and other problems with existing credit reporting systems.

Another object of the invention is to provide a uniform system and method for collecting credit information for credit recipients over the world.

Another object of the invention is to provide a system and method that allows system to system communication of credit information.

Another object of the invention is to provide a system and method for translating and collecting credit history information from a variety of different formats and storing that data in a credit history database in a uniform manner.

Another object of the invention is to provide a credit history system and method for receiving and using data from existing formats throughout the

world.

Another object of the invention is to provide a credit history system and method that enables users to generate reports in different languages, formats and currencies.

Another object of the invention is to provide a credit history system and method that displays graphical user interfaces to the user in the user's preferred language.

The invention relates to a system that accepts credit information from any source, translates it into a uniform credit information format and stores that data into a database. Therefore, according to one embodiment, consumer or commercial information from an arbitrary source from anywhere in the world may be stored in and delivered from a single system. The invention may be interfaced to existing credit history systems, because those existing systems do not have to be altered to report a different credit history format. The existing system's format may be translated into the uniform credit information formats and then stored on the system for use in reporting credit history.

Also, because of the variation in language, currency, consumer identification protocols, address and other formats, the invention provides a database that stores an integral code or indicator of the type of data being stored.

For example, for currency fields, the numerical amount of the currency may be stored along with an indicator of the currency denomination. Accordingly, credit information including balances from one country may be readily translated into credit information in another country.

Also, the fields stored in the database may be configured to accommodate large names, as used in some countries, or larger currency values for countries having relatively large numerical exchange rates, such as Mexico or Italy, for example. In this manner, the uniform database is able to accept data from all originating countries without having to be individually customized for implementation in different countries.

Additional fields may be stored in the database that permit for better modeling and scoring. Modeling and scoring techniques are used by credit issuers to evaluate the credit worthiness of an application for credit and also assess future risk, fraud possibility, potential profitability and other factors.

Accordingly, the database contains a rich and extensible structure of stored fields, such as ten year's worth of account history, rate, balance, past due, and monthly payment amounts, credit limits and highest credit granted, charge off amount and date, payment date, expiration date (particularly for credit card accounts), and defined status messages with associated codes. This is rather than simply providing free-form verbiage that is not useful to score or to sort accounts, as in some prior art systems.

Also, the invention may store graphical user interfaces, code tables listing selections to be made by a user, and other textual or graphical information in multiple languages. A user may select the language desired for the graphical user interface. Reports may also be generated in different languages or formats by storing different textual information to be printed on the report and permitting the user to

select the language for the report. The currency denomination of the report may also be selected by the user and generated by using the currency codes stored with the credit history data stored in the database.

#### Brief Description of the Drawin2s

Fig. 1 illustrates an overall system according to one embodiment of the invention.

Fig. 2 illustrates a translation of account information performed by a system according to the invention.

Fig. 3 illustrates a translation of account information performed by a system according to another embodiment of the invention.

Fig. 4 illustrates a data transmission format according to the invention.

Fig. 5 illustrates a flow chart of credit update processing according to the invention.

#### Detailed Description of the Preferred Embodiments

An overall credit system architecture according to one embodiment of the invention is depicted in Fig. 1. As shown in that figure, the overall credit system 100 comprises an arbitrary number of client customer systems, shown as 10a through 10n although a single customer system 10a may be deployed.

Customer systems 10a through 10n communicate with a central credit system 16. Central credit system 16 comprises a storage and retrieval system 18 in communication with one or more databases 20. Additionally, central credit

system 16 may communicate with other credit systems 24 housing their own credit records.

Customer systems 10a through 10n constitute a report requesting element 42 which permits any one or more of customer systems 10a through 10n to request reports from central credit system 16 over a network connection.

Report requesting element 42 may comprise a GUI selection unit 44 through which users at customer systems 10a through 10n may request credit reports from central credit system 16. Central credit system 16 may generate reports 26 to one of customer systems 10a through 10n based on information stored in database 20, as described in more detail below. Reports 26 may also be generated for and transmitted to other systems or entities including credit systems 24.

According to one embodiment of the invention, credit information may be directly transmitted from customer systems 10a through 10n to central credit system 16 over a network. The network may be or include as a segment any one or more of, for instance, the Internet, an intranet, a LAN (Local Area Network), WAN (Wide Area Network) or MAN (Metropolitan Area Network), a frame relay connection, Advanced Intelligent Network (AIN) connection, a synchronous optical network

(SON-ET) connection, a digital T1, T3 or E1 line, Digital Data Service (DDS) connection, DSL (Digital Subscriber Line) connection, an Ethernet connection, ISDN (Integrated Services Digital Network) line, a dial-up port such as a V.90, V.34 or V.34bis analog modem connection, a cable modem, an ATM (Asynchronous Transfer Mode) connection, FDDI (Fiber Distributed Data Networks) or CDDI (Copper Distributed Data Interface) connections, WAP (Wireless Application Protocol), GPRS (General Packet Radio Service), GSM (Global System for Mobile Communication) or CDMA (Code Division Multiple Access) radio frequency links, RS-232 serial connections, IEEE-1394 (Firewire) connections, USB (Universal Serial Bus) connections or other wired or wireless, digital or analog interfaces or connections.

Accordingly, the implementation of the invention eliminates the need for physical storage media to store the credit information and then ship that physical storage medium to the credit reporting system for input and storage, although such a method of transmission to central credit system 16 may also be used within the scope of the invention.

System to system communication may be performed by customer system 10 transmitting credit information to central credit system 16 data in a predetermined format that is received by central credit system 16. For example, according to one embodiment, as described in more detail below, a format created by Equifax Inc. called the International Consumer and Commercial Input Format (ICCF) may be used. Version 2 of the ICCIF format, including fields and records, is more fully disclosed as an Appendix to this application.

The ICCIF format may comprise consumer base records and commercial base records, each with a header and trailer record. Consumer base records may comprise fields for consumer base, consumer name, address information, identification information, telephone number, relationship information, historical information, collateral information, account number change, purchased portfolio/sold to segment, employment and other income. -The commercial base segment may comprise fields for commercial base, address information, identification information, telephone number, relationship information, commercial base, commercial financial information, commercial name, historical information, collateral information, account nw-nber change, and purchased portfolio/sold to.

According to one embodiment of the invention, some or all of this selection of information may be required by central credit system 16. For example, it may be required to provide the header and file trailer, as well as the consumer name, and address for the consumer base segment and the commercial base and commercial name for the commercial base segment.

Fig. 4 illustrates an example of a ICCIF customer transmission including both consumer and commercial base segments. According to one aspect, the character format may be a variable block format. Other fields may be either variable or fixed. A variable block format sends only data, whereas the fixed field format sends a data block equal in size to that allotted, even if much of the content is blank. As shown in Fig. 4, the format used for system to system transfers may comprise a header record, a plurality of consumer base segments, 1 5 and a trailer record. The format may also comprise a header

record, a plurality of commercial base segments and a trailer record. Multiple consumer base segment blocks and commercial base segment blocks may also be sent.

According to the invention, the ICCIF format may employ or embed certain conventions for data transmission. For example, alphabetic fields may be upper case letters. Numeric fields may be right justified and zero filled. If a descriptive field is not available, it may be filled with blanks. If a numeric field is not available, it may be zero filled. For date fields, the data may be formatted in YYYYMMDD format. If a date is not available, the field 01 may be used.

For currency fields, whole numbers of currency may be used, for example, dollars without cents. For time stamp fields, the convention YYYYMMDDHHMMSS may be used.

Accordingly, customer systems 10a through 10n may transmit data directly to central credit system 16 in a predetermined format, such as ICCIF.

Other customer systems 10 may also directly transmit information to central credit system 16.

As depicted in Fig. 1, central credit system 16 may also receive credit information from a customer system 10b that transmits data in a format different from that received by credit system 16. For example, many existing customer systems in the world already have established idiosyncratic reporting formats.

Altering such formats may be costly and require a significant overhaul of those existing local systems. The invention enables a central credit system 16 to receive, process, and store information, even from existing systems that transmit information in a different format from ICCIF or other standard protocol.

According to another aspect of the invention, a forr-nat translator 14 may be used to receive data from customer systems 10 in a data format 12, translate that data into the predetermined data format, such as ICCIF, and then transmit that information to central credit system 16. Format translator 14 may be an adaptation of customer system 10, may be a stand-alone unit intermediate between customer system 10 and central credit system 16, or may comprise an 15 element of central credit system 16.

As described above, different customer systems may report credit history using different native formats. The formats from different countries may differ and sometimes reporting systems in the same country differ as well. Through format translator 14, credit information from customer systems 10 may be accepted and processed by credit system 16 regardless of the format used by customer system 10 to report that information.

One embodiment of a format translator 14 is illustrated in Figs. 2 and 3.

Fig. 2 illustrates a first data format record 50 from a customer system 10, for example. Fig. 2 also depicts a second data format record 52, such as an ICCIF format record. In this embodiment first data format record 50 comprises fields for consumer social security number, consumer name, consumer address,

telephone number, and other information. According to one embodiment, format translator 14 may receive first data format record 50 and parse that record to determine the various elements.

Each field from first data format record 50 may be assigned to or associated with a field in second data format record 52. That assignment may be predetermined and stored with fon-nat translator 14. However, because a direct correspondence between fields may not occur, a lexical analyzer or other modules may be used to detect and find a best fit to place the data format from first data format record 50 into second data format record 52.

For example, in the illustrated first data format record 50, consumer social security number is provided. Second data format record 52, illustrated as an ICCIF format record, does not have a corresponding field for social security number information. Consumer social security number may be predetermined by format translator 14 to be a type consumer identification information, and may be placed in the consumer identification information field in the second data format record 52.

Conversely, some information required by the ICCIF format may not be provided from a single field in the first data format record 50. Accordingly, information in a single field from first data format record 50 may be split into two or more fields in second data format record 52, to make subfields available for association. Likewise, individual fields from first data format record 50 may be combined for the purpose of creating a match to a desired field of second data format record 52. Format translator 14 may also include other components for taking a record in one format and translating it into another format, such as the ICCIF format.

Fig. 3 illustrates another example of format translator 14 translating information into another format. According to the embodiment depicted in Fig.

3(a), a record for Consumer Smith from Mexico is provided and in Fig. 3(b), a record for Consumer Jones is provided. For these two records to be assimilated into the same database, the ICCIF format may be used.

As shown in Fig. 3, the two records contain different fields of information. The Consumer Smith record from Mexico lists Mr. Smith's identification number. Mr. Jones' record, on the other hand, lists his U.S. social security number. Both of these numbers may be considered consumer

identification information and may be translated into the identification information field of the ICCIF format record, as depicted in Fig. 3. In doing so, however, that information is simply an abstract number with no reference.

Therefore, in order to understand what that number represents, a code may be associated with the input that indicates the type of input. According to one aspect of the invention, ISO (International Standards Organization) codes may be used to designate the country of origin of the record and the specific definition of the associated number. Other codes may also be used to designate the type of input as well.

In some countries, such as Mexico, multiple identification formats may be used. For such countries, additional codes may be used to correspond to the various formats. Different codes may

therefore be used to designate social security number, RFC/CLJRP - Government ID, IMSS Tax ED, Driver's 15 License, Passport, Professional License, Voter Registration, and DUNS, to name examples of codes that may be used for the identification number field.

Similarly, the address field may differ for records from Mexico and the United States. Many countries use different address conventions which therefore may need to be coded so that the information may be more easily stored and searched in ICCIF format.

Also, account balance information from different countries may be reported in the currency of the originating country or even multiple currencies.

For example, for Mexico, the customer may desire to receive reports in Peso, Old Peso and US Dollars, for example. Reported currencies may be stored in ICCIF by storing the amount and a code associated with the currency information. Other monetary values may similarly be coded to indicate the currency denomination in which the value is being reported.

Through the use of codes and by providing relatively flexible data field formats, the system according to the present invention is customizable for any credit reporting system. A single credit reporting system and associated database may be used all over the world, such as countries like Mexico, India, Argentina, and the United States, without requiring modification to the database or the format of information being stored therein.

By creating a format translator for translating the format of the existing reporting system and updating the code tables that list available codes for that system, central credit system 16 may be readily implemented and extended.

The database structure itself for central credit system 16, such as one based on the ICCIF format, may be used in all countries without the need for modification of the database structure of the data stored.

In addition to those data fields with which codes are associated, at least the following additional codes may be used: account type, address type, association termination, business type, collateral description, country name, currency type, employment type, gender, ID type, industry, language, location of incorporation, name suffix, name title, name type (commercial), name type 15 (consumer), occupation type, operating status, other income frequency, other income type, ownership, phone number type, portfolio type, position title, rate, reason left employment, relationship, salary frequency, special comments, and terms frequency. Other codes associated with information fields may also be used within the scope of the invention.

Once all of the data is received by central credit system 16 and through the use of storage/retrieval system 18, the information is stored into one or more databases 20. According to one embodiment of the invention, each of databases 20 may comprise a relational database system correlating customer information to consumer and commercial information in the database. For example, the Oracle8 relational database sold commercially by Oracle Corp. may be used.

Other databases such as DB2 or other data storage or query formats such as SQL may also be used in the present invention.

Central credit system 16 may also share credit information with other foreign credit systems 24. Foreign credit systems 24 may store information in a different format as well. Accordingly, another format translator 22 may be used to translate information stored at central credit system 16 to another format as used by foreign credit system 24. Again, format translator 22 may comprise an element of central credit system 16, a stand-alone unit or may comprise an adaptation to foreign credit systems 24. Format translator 22 may operate in a reverse fashion to that of format translator 14.

Among other advantages, a credit system implemented according to the invention is able to report a single consumer's credit history even if the consumer moves to different countries. For example, a consumer that is born in Mexico, moves to the United States and then moves to Argentina may have credit history in all of those countries. When that consumer applies for credit in Argentina, according to the invention credit history information stored for that individual may be retrieved from Mexico and the United States and may be reported to an Argentinian credit provider in the local currency. Or, other currency denominations may be presented through use of the **currency codes and conversion tables**.

Different currency denominations may be presented for different periods of time based on the date of the amounts stored in the database. To provide up-to-date **conversion of currency**, the **conversion tables** may be updated periodically based on currency exchange rates at the time. For example, an outstanding balance reported in dollars in the United States could be reported to the Argentinian credit provider in United States Dollars or Argentinian Pesos, or any other currency that the credit provider desires.

As described above, it may be desired to transmit information from central credit system 16 to a foreign credit system 28. In doing so, that foreign credit system may transmit all available information or only provide certain information, such as negative credit information. Accordingly, a field may be stored indicating the type of information contained within a set or subset of the records in the database 20. Only negative information may then be provided to the foreign credit system by selection based on those codes stored with the data.

System 100 may comprise another facilitating its use in any part of the WO 00/1 1586 PCTIUS99/18725  
14

Similarly, customer system 10 may comprise a graphical user interface for enabling a user at customer system 10 to initiate transmission of customer credit information to central credit system 16. GUI selection system 44 may be used to modify the language of GUIs used to generate those requests as well.

Another aspect of the invention permits selection of the language of the reports generated by central credit system 16. Central credit system 16 may comprise a report language determination unit 40 to enable selection of the language of the report to be generated. Again, a plurality of report formats may be stored corresponding to each potential language. A user, through customer system 10 or an operator at central credit system 16, may input a selection for the language of the report.

Again, a database table that stores language codes for the report and the actual text corresponding to each language code may be used to store the textual information to be output on the report. The report then uses the language type selected to choose the appropriate textual output for the report when generating the report for that user.

As an example, one user may desire to see a particular potential new account holder's credit history in English and U.S. Dollars, whereas another user, for example, a potential credit issuer in Mexico, may desire to see the credit history in Spanish and Pesos. The English user may select English and U.S. Dollars through report language determination unit 40 which then generates a report listing headings for consumer, account number, address, etc.

in English. Further, all currency fields may then be reported in dollars, by collecting the currency fields for that consumer from the database, using the currency code associated with the currency value and translating that currency, if necessary, to U.S. Dollars and outputting that information in the report.

Another user in Mexico may desire to see the potential new account holder's credit history in English, but the currency in Pesos (for example, a U.S. bank operating in Mexico).

Through the use of codes corresponding to the language of the report and the currency of the report, any combination of reports may easily be generated by report language determination unit without requiring reprogramming for each country in which the system is implemented.

A flow chart illustrating the credit update processing of the invention is illustrated in Fig. 5. In step 200, processing begins. In step 202, a request for information or notification of update is received from a client, such as foreign credit system 24. In step 204, the format of the remote credit information format is determined, such as ICCIF or a native format to the foreign location.

In step 206, if the credit update or request is not in a universal format such as ICCIF the foreign credit information is translated to universal format including by means of format translator 14, format translator 22. In step 208 the desired credit fields are updated or retrieved. In step 210, the resulting credit fields are translated back to foreign format if necessary. In step 212, the resulting credit information is transmitted to foreign credit system 24 or other client. In step 214, processing ends.

Other implementations and variations of the invention will be apparent to those skilled in the art from the illustrations, specification and practice of the invention disclosed herein. The scope of the invention is accordingly intended to be limited only by the following claims.

## **Claims:**

- 1 A method of communicating information between a client source and a network database, comprising the steps of:
  - a. receiving an input of network database update information from the client source at an input port to the database;
  - b. interpreting coding fields within the network database update information to the network database; and
  - c. updating the network database according to the input.
- 2 The method of claim 1, wherein the step of interpreting comprises the

step of examining the coding fields of the input to associate information fields in the input with information fields in the network database.

3 The method of claim 1, wherein the network database comprises a credit file.

4 The method of claim 3, wherein the input comprises information transmitted from a financial record recorded in a different denomination than the information fields of the network database.

5 The method of claim 4, farther comprising the step of translating the financial information from a first denomination to a second denomination according to an exchange rate.

6 The method of claim 5, wherein the exchange rate is updated periodically.

7 The method of claim 1, further comprising the step of communicating an update to a second network database.

8 The method of claim 1, wherein the network database stores records according to the International Consumer and Commercial Input format.

9 The method of claim 1, wherein the database comprises at least one of consumer information and vendor information.

10 The method of claim 1, wherein the information fields of the network database are extensible.

11 The method of claim 1, wherein the network database receives information from the source in a country or origin different than a country of recordation of the information shared by the database.

12 The method of claim 1, wherein the network database comprises a relational database.

13 The method of claim 1, further comprising a step of transmitting information to a foreign country.

14 The method of claim 1, further comprising the step of receiving a report request for credit information in a specified format. 15. The method of claim 14, wherein the specified format comprises at least one of designated language, designated currency denomination and designated other information.

16 A system for communicating information between a client source and a network database, comprising: 15 an input port, the input port being connected to the network database and receiving an input of network database update information from the client source; a processor unit, connected to the input port, the processor unit interpreting coding fields within the network database update information to the network database and updating the network database according to the input.

17 The system of claim 16, wherein the processor unit interprets the coding fields by examining the coding fields of the input to associate information fields in the input with information fields in the network database.

18 The system of claim 16, wherein the network database comprises a credit file.

19 The system of claim 18, wherein the input comprises information transmitted from a financial record recorded in a different denomination than the information fields of the network database.

20 The system of claim 19, wherein the processor unit translates the financial information from a first denomination to a second denomination according to an exchange rate.

21 The system of claim 20, wherein the exchange rate is updated periodically.

22 The system of claim 16, further an output port connected to the network database, the output port communicating an update to a second network database.

23 The system of claim 16, wherein the network database stores records according to the International Consumer and Commercial Input format.

24 The system of claim 16, wherein the database comprises at least one of consumer information and vendor information.

25 The system of claim 16, wherein the information fields of the network database are extensible.

26 The system of claim 16, wherein the network database receives information from the source in a country or origin different than a country of recordation of the information shared by the database.

27 The system of claim 16, wherein the network database comprises a relational database. 28. The system of claim 16, wherein the processor unit transmits information to a foreign country.

29 The system of claim 16, wherein the processor unit receives a report request for credit information in a specified format.

30 The system of claim 29, wherein the specified format comprises at least one of designated language, designated currency denomination and designated other information.

Appendix - ICCIF Format Segment 01 (Header Record) The Header Record must be the first record on the ICCIF file and should include information necessary to identify the credit data provider. The following tables illustrates the contents of the Header Record. Field Field Name and Description Length Position Alpha/ Required/Number Numeric Optional RECORD IDENTIFIER 2 1-2 N R Contains a constant used to identify this record. Must contain a constant of 01. FILE ID 8 3-10 AN 0 A control number assigned by the data provider to the file for tracking purposes. DATE REPORTED - 7 8 11-18 N R Signifies the date of the most recent update to a subject's account balances. If the file includes accounts updated on different dates, use the most recent date. Report in date format. FILE SEQUENCE NUMBER 2 19-20 N 0 Contains the sequence number of each file. CUSTOMER FORMAT DATE 8 21-28 N 0 Contains the date on which the format creation program was completed. Report in date format. VERSION 4 29-32 N 0 Identifies the version of the standard reporting format used in your system. Record a constant of "000 1" when using the ICCIF format. REVISION DATE 8 33-40 N 0 Contains the last date your reporting format was revised. Report in date format. CREDIT GRANTOR NAME 50 41-90 AN R Contains the credit grantor's name which should be developed by the subscriber and the credit reporting agency. This field must be consistent on a month-to-month basis. Notify the credit reporting agencies before changing this code. Field Field Name and Description Length Position Alpha/ Required/Number Numeric Optional EQUIFAX IDENTIFIER 13 91-103 AN R Contains a unique identification number assigned by the credit reporting agency to this credit grantor. This field must be consistent on a month-to-month basis. Notify credit reporting agencies before adding, deleting, or changing the identifiers in this field. DATA CENTER CODE 3 104-106 AN 0 Uniquely identifies which data processing center generated a file. 1 1 LOCATION CODE 15 107-121 AN 0 Use only if the data processing center produces files for more than one location. Contains an identity code which should be developed by the credit grantor for the location, for whom the data is being reported. 1 2 DATE CREATED 8 122-129 N 0 Contains the date the file was generated. Report in date format. CYCLE NUMBER 2 130-131 N 0 Contains the cycle number for the information being reported, if reporting by cycles. If the date contains more than one cycle, report the first cycle number found on the data. REPORTER NAME 35 132-166 AN 0 Contains the name of the processing company sending the data. For example, the name of the credit grantor or processor. If multiple Identification Records are provided, you must repeat the Reporter Name on the second and, subsequent headers. REPORTER ID 15 167-181 AN 0 ID assigned to the processing company sending the data. For example, credit grantor or processor. If multiple Identification Records are provided, you must repeat the Reporter ID on the second and subsequent

identificationrecords. This field must be consistent on amonth-to-month basis. Notify the creditreporting agencies before changing this code. Field Field Name and Description Length Position Alpha/ Required/Number Numeric Optional REPORTER ADDRESS LINE 1 60 182-241 AN 0 Contains the first line (street address) of the mailing address for the processing company. IREPORTER ADDRESS LINE 2 60 242-301 AN 0 Contains the second line (street address, city, state, and postal code) of the mailing address for the processing company. REPORTER ADDRESS EXTRA LINE 60 302-361 AN 0 Contains the complete mailing address (street address, city, state, and postal code) for the processing company. REPORTER PHONE COUNTRY 3 362-364 N 0 Contains the data processing company's phone country number. REPORTER PHONE NUMBER 20 365-384 AN 0 Contains data processing company's phone number. If the entire phone number is not available, zero fill. REPORTER PHONE EXTENSION 10 385-394 AN 0 Contains the data processing company's phone extension. BYTE COUNT 15 395-409 N 0 Total number of bytes within this group or file which includes the identification record, consumer or commercial base record, all subsequent records, and a total record. The byte count must include one extra byte per record to account for the new line delimiters. LANGUAGE TYPE CODE 3 410-412 AN 0 Designates the language type. RESERVED 25 413-437 N 0 Blank fill. IFILLER 38-447 AN 0 1131 blank fill. Segment 02/20 (Consumer Base/Commercial Base) The Consumer/Commercial Data Record consists of the base segment of the standard reporting format and any optional segments that may be appended. This section describes each data element in the base segment, which should be used to report the primary borrower. Field Field Name and Description Length Position Alpha/ Required/Number Numeric Optional SEGMENT IDENTIFIER 2 1-2 N R Unique code used to identify this segment. Must contain a constant of 02/20. CUSTOMER BRANCH ID 15 3-17 AN 0 Uniquely identifies the credit grantors internal code for each branch or office where information is verified. Right justify and zero fill. The entire field should never be zero, blank, or nine (9) filled. This field must be consistent on a month-to-month basis. Notify credit reporting agencies before adding, deleting, or changing the identifiers in this field. ACCOUNT NUMBER 35 18-52 AN R Report the unique account number as extracted from your file. Left justify and space fill. Do not include embedded blanks or special characters. Account number encryption is permitted when using one of the standard encryption options. Contact your local credit reporting agency for information regarding the encryption techniques. PORTFOLIO TYPE CODE 6 53-58 AN R Used to designate an account portfolio. See Appendix A for a list of valid codes. ACCOUNT TYPE CODE 6 59-64 AN 0 Contains the account type code used to identify the account classification. See Appendix A for a list of valid codes. Field Field Name and Description Length Position Alpha/ Required/Number Numeric Optional ACCOUNT STATUS CODE 6 65-70 AN 0 Contains the status code that properly identifies the current account condition. This is a required field. The Special Comments (field 7) should be used along with this field to further define an account. See Appendix A for a list of valid codes. SPECIAL COMMENTS CODE 6 71-76 AN 0 Used along with the Account Status to further define an account. For example, closed accounts, accounts in dispute, or adjustments pending. See Appendix A for a list of valid codes. S. UPDATE INDICATOR 1 77 N R Used to replace the most recently reported update for the same reporting period. Valid values: 0 - Not a replacement update (default) 1 - Replacement update TERMS FREQUENCY CODE 6 78-83 AN 0 For installment and mortgage accounts, report the frequency for payments due. See Appendix A for a list of valid codes. TERMS 3 84-86 N 0 Contains the duration of the credit extended or the number of periods for which payments must be made. 1 1 TERMS PAYMENT AMOUNT 15 87-101 N 0 Report the amount of the scheduled term payment. Report in amount format. For installment accounts, report the regular payment. For revolving and line of credit accounts, report the minimum amount due based on the balance not including any past due amounts. For open accounts, zero fill. For mortgage accounts, include the total monthly payment including principal, interest, and escrows. Field Field Name and Description Length Position Alpha/ Required/Number Numeric Optional TIME STAMP 14 102-115 N 0 Contains the reported date and time of actual account information. Report in time stamp format. JDATE OPENED 8 116-123 N R Date on which an account was originally opened. Retain the original Date Opened regular less of future activity, such as transfer, refinance, or lost or stolen card. For returned checks, report the date the check

was written. Report in date format. DATE OF OCCURRENCE (Date Last Activity) 8 124-131 N 0 This field represents the date of last activity on the account. Report in date format. 5 DATE OF LAST PAYMENT 8 132-139 N 0 Report the date of the last payment. Report in date format. HIGHEST CREDIT AMOUNT 15 140-154 N 0 Report the highest account balance in this field, and the Credit Limit in field 19. Report in amount format. For returned checks (all portfolio types), report the original amount of the check, excluding fees and interest. 7 CURRENT BALANCE AMOUNT 15 155-169 N R Report the total current account balance. Report credit balances as zero. For negative values, the left-most character must be "-". For example, Report in amount format. PAST DUE AMOUNT 15 170-184 N 0 Report the amount past due. The amount should approximate the number of full cycles past the due date times the Monthly Payment and can include late charges and fees. Report in amount format. If the account status is current, this field should also be zero. Do not include the current amount due in this field. Field Field Name and Description Length Position Alpha/ Required/Number Numeric Optional CREDIT LIMIT AMOUNT 15 185-199 N R Contains the assigned account credit limit. Report in amount format. For revolving or line of credit accounts, report the assigned credit limit. For open, installment, or mortgage accounts, zero fill. LAST PAYMENT AMOUNT 15 200-214 N 0 Report the amount paid. Report in amount format. BALLOON DUE DATE 8 215-222 N 0 Report the date on which the balloon payment is due. Report in date format when amount, exists. BALLOON PAYMENT AMOUNT 15 223-237 N 0 Report the amount of the balloon payment. Report in amount format. ACCOUNT EXPIRATION DATE 8 238-245 N 0 Contains the expiration date for an account. Report in date format. OWNERSHIP CODE 6 246-251 AN R Used to designate an association with an account. For example, an individual or joint account. See Appendix A for a list of valid codes. DATE CLOSED 8 252-259 N 0 Contains the date on which an account was closed. Report in date format. RATE CODE 6 260-265 AN R Contains the rate assigned to an account. See Appendix A for a list of valid codes. CHARGED OFF AMOUNT 15 266-280 N 0 Contains the amount that has been subtracted from the balance due because of a charge to loss. Report in amount format. CHARGED OFF DATE 8 281-288 N 0 Contains the date on which the charge off occurred. Report in date format when charge off amount exists. Note: If you enter a date in this field, you must supply an amount in the CHARGED OFF AMOUNT field (27). Field Field Name and Description Length Position Alpha/ Required/Number Numeric Optional CURRENCY TYPE CODE 3 289-291 AN R Contains the International Standards Organization (ISO) standard currency type, code. See Appendix A for a list of valid codes. RESERVED 25 292-316 AN 0 Blank fill. FILLER 1 0 317-326 AN 0 Blank fill. Segment 04 (Consumer Name) The following table describes consumer name. Field Field Name and Description Length Position Alpha/ Required/Number Numeric Optional SEGMENT IDENTIFIER 2 1-2 N R Unique code used to identify this segment. Must contain a constant of 04. IPATERNAL NAME/SURNAME 50 3-52 AN R Report the consumer's paternal name. MATERNAL NAME 50 53-102 AN 0 Report the consumer's maternal name. If not available, blank fill. FIRST NAME 50 103-152 AN R Report the consumer's first name. MIDDLE NAME 50 153-202 AN 0 Report the consumer's middle name or initial. If not available, blank fill. NAME TYPE CODE 6 203-208 AN 0 Used to designate the type of consumer name. See Appendix A for a list of valid codes. NAME SUFFIX CODE 6 209-214 AN 0 Used to distinguish Junior, Senior, or III. See Appendix A for a list of valid codes. INAME TITLE CODE 6 215-220 AN 0 Used to designate a consumer's title. See Appendix A for a list of valid codes. BIRTH DATE 8 221-228 N 0 Contains the date of birth for the consumer specified in this Segment. Report in date format. 1 0 DEATH DATE 8 229-236 N 0 Contains the date of death for the consumer specified in this Segment. Report in date format. 1 1 GENDER CODE 6 237-242 AN 0 Contains the gender for the consumer specified in this Segment. See Appendix A for a list of valid codes. 1 2 LANGUAGETYPE CODE 3 243-245 AN 0 Designates the consumer's language. 1 3 IRESERVED 25 246-270 AN 0 Blank fill. FILLER 1 0 271-280 AN 0 Blank fill. Segment 06 (Address Information) The following table describes address information for the subject. Field Field Name and Description Length Position Alpha/ Required/Number Numeric Optional SEGMENT IDENTIFIER 2 1-2 N R Unique code used to identify this segment. Must contain a constant of 06. FIRST LINE OF ADDRESS 60 AN R Contains the first line of the mailing address for the subject and usually includes the street number, direction, street name, and type of thoroughfare. Left justify and blank fill. An apartment name or number should follow the street name. If the mailing address is a P. O. Box or Rural

Route, include the Box or Routefollowed by the number. For example, P. O.Box 100. Do not report both a street addressand a P. O. Box. Eliminate internal messagessuch as:"Do not mail", "Attomey", "Charge off",and "Fraud." Do not enter the credit grantors,address in this field.SECOND LINE OF ADDRESS 60 63-122 AN 0Contains the second line of the street addressfor the subject, which is usually city andprovince. Left justify and blank fill any unusedportions. Separate city name and provinceabbreviations by a comma. Eliminate internalmessages such as: "Do Not Mail", "Attorney", "Charge off", and "Fraud." Contact the creditreporting agencies to discuss the use of,internal messages.EXTRA LINE OF ADDRESS 60 123-182 AN 0If three lines of address are maintained for anaccount, this field should be used for city andprovince. Left justify and blank fill any unusedportions. If not used, blank fill. Eliminateinternal messages such as: "Do Not Mail", "Attorney", "Charge off", and "Fraud." Contactthe credit reporting agencies to discuss the useof internal messages.Field Field Name and Description Length Position Alpha/ Required/Number Numeric OptionalPOSTAL CODE 15 183-197 AN RReport the postal code of the subject'saddress. Left justify and blank fill.CITY NAME 30 198-227 AN 0Contains the city of the subject's address.DISTRICT NAME 30 228-257 AN 0Contains the District of the subject's address.COUNTY NAME 30 258-287 AN 0Report the county of the subject's address ifavailable.PROVINCE/STATE NAME 35 288-322 AN 0Report the Province or State of the subject'saddress if available.ADDRESS TYPE CODE 6 323-328 AN 0Indicates the type of address that is reported inthis segment. See Appendix A for a list of validcode@I 1 RESIDENCE CODE 6 329-334 AN 0Used to designate if the address described inthis segment is owned or rented by the subject.If not available, blank fill. See Appendix A for a,list of valid codes.COUNTRY CODE 3 335-337 AN RContains the International StandardsOrganization (ISO) standard country code.ADDRESS VERIFICATION INDICATOR 1 338 N 0Indicates whether or not this is a confirmedaddress.0 - not a confirmed address1 - address reported is known to be theaddress.ADDRESS VERIFICATION DATE 8 339-346 N 0Report the date the address was validated. Report in date format.1 5 ADDRESS SINCE DATE 8 347-354 N 0The date since the subject reports to havebeen at this address. Report in date format.LANGUAGE TYPE CODE 3 355-357 AN 0Designates the subject's language.1 7 RESERVED 25 358-382 AN 0Blank fill.FILLER 10 383-392 AN 0Plank fill. Segment 08 (Identification Information).Field Field Name and Description Length Position Alpha/ Required/Number Numeric OptionalSEGMENT IDENTIFIER 2 1-2 N RUnique code used to identify this segment. Must contain a constant of 08.SUBJECT ID NUMBER 20 3-22 N RReport the ID number of subject specified inthe Consumer or Commercial Name Segment. Report in ID format.ID TYPE CODE 6 23-28 AN RUsed to designate the type of ID number. SeeAppendix A for a list of valid codes.ID VERIFICATION INDICATOR 1 29 N 0Indicates whether or not the reported ID hasbeen verified.0 - ID not verified11 . ID verifiedID VERIFICATION DATE 8 30-37 N 0This field is used to represent the date in whichthe ID was verified by the credit grantor asbeing the actual ID number for the subject. Ifthis field contains a date, the IDVERIFICATION INDICATOR field must containla '11'. Report in date format.LANGUAGE TYPE CODE 3 38-40 AN 0Designates the subject's language.RESERVED 25 41-65 AN 0Blank fill.IFILLER 10 66-75 AN 0JBBlank fill.Segment 10 (Telephone Number)Field Field Name and Description Length Position Alpha/ Required/Number Numeric OptionalSEGMENT IDENTIFIER 2 1-2 N RUnique code used to identify this segment.Must contain a constant of 1 0. fPHONE COUNTRY CODE 3 3-5 N 0Used to designate the country code for thetelephone. If the country code is not available,zero fill.PHONE NUMBER 20 6-25 AN RContains the phone number of the subjectspecified in the Consumer or CommercialBase Segment. If the phone number is not,available, blank fill.PHONE EXTENSION 10 26-35 AN 0Designates the telephone extension. If thephone extension is not available, blank fill.PHONE NUMBER TYPE CODE 6 36-41 AN RUsed to designate the type of phone number. See Appendix A for a list of valid codes. Default is Residence Telephone.PHONE NUMBER VERIFICATION 1 42 N 0INDICATORIndicates whether or not the phone numberhas been verified.0 - not verified1 -verifiedPHONE NUMBER VERIFICATION DATE 8 43 N 0This field is used to represent the date in whichthe phone number was verified by the creditgrantor as being the actual phone number forthe subject. If this field contains a date, thePHONE NUMBER VERIFICATIONINDICATOR field must contain a'1'. Report indate format.ILANGUAGE TYPE CODE 3 51-53 AN 0Designates the subject's language.RESERVED 25 54-78 AN 0Blank fill.I 0 FILLER 1 0 1 79-88 1 AN 01131ank fill.Segment 12 (Relationship Information)Note: This segment is

reserved for future use. Field Field Name and Description Length Position Alpha/ Required/Number Numeric Optional SEGMENT IDENTIFIER 2 1-2 N R Used to identify this segment. Must contain a constant of 12. OWNERSHIP CODE 6 3-8 AN R Used to designate a trade account as joint or individual. See Appendix A for a list of valid codes. PATERNAL NAME/SURNAME 50 9-58 AN R Report the paternal name of the individual with a relationship to the subject. MATERNAL NAME 50 59-108 AN 0 Report the maternal name of the individual with a relationship to the subject. If not available, blank fill. FIRST NAME 50 109-158 AN R Report the first name of the individual with a relationship to the subject. If not available, blank fill. MIDDLE NAME 50 159-208 AN 0 Report the middle name of the individual with a relationship to the subject. If not available, blank fill. NAME SUFFIX CODE 6 209-214 AN 0 Used to distinguish Junior, Senior, III, or Esquire. If not available, blank fill. See Appendix A for a list of valid codes. INAME TITLE CODE 6 215-220 AN 0 Used to designate the title. For example, Dr. or President. See Appendix A for a list of valid codes. BUSINESS TITLE CODE 6 221-226 AN R Used to designate the title or position of the business associate. See Appendix A for a list of valid codes. Field Field Name and Description Length Position Alpha/ Required/Number Numeric Optional BIRTH DATE 8 227-234 N 0 Contains the date of birth for the individual specified in this Segment. Report in date, format. GENDER CODE 6 235-240 AN 0 Contains the gender for the individual specified in this Segment. See Appendix A for a list of valid codes. RELATIONSHIP CODE 6 241-246 AN R Used to designate the type of relationship or business association to the subject identified in the Consumer Name (04) or Commercial Name (24) segments. For example, if John Smith is in the "04" segment (base subject) and "Mary" (John's mother) is in the relationship segment, then Mary's "relationship" value would be "006002 - Parent of", meaning that "Mary" is "John's" mother. See Appendix A for a list of valid codes.

1 3 ASSOCIATION TERMINATION CODE 6 247-252 AN R Use to designate the reason an association was terminated. See Appendix A for a list of valid codes. ASSOCIATION TERMINATION DATE 8 253-260 N R Indicates the date on which the account association was terminated. Report format in date format.

1 5 FIRST LINE OF ADDRESS 60 261-320 AN R Contains the mailing address for the individual

al identified in this segment and usually includes the street number, direction, street name, and type of thoroughfare. Left justify and blank fill. Apartment names or numbers should follow the street name. If the mailing address is a P.O. box or Rural Route, include the Box or Route followed by the number. For example, P.O. Box 100. Do not enter credit grantor's address in this field. Field Field Name and Description Length Position Alpha/ Required/Number Numeric Optional SECOND LINE OF ADDRESS 60 321-380 AN 0 Contains the second line of address information which may include the city and province. Left justify and blank fill any unused portions. Delete the right-most positions if the city name is greater than 23 characters, or use the standard 13-character postal city abbreviations. Separate the city name and province abbreviation by a comma. EXTRA LINE OF ADDRESS 60 381-440 AN 0 Use this field only if three lines of address information are required for an account. Delete the right-most positions if the city name is greater than 23 characters, or use the postal city abbreviations. Left justify and blank fill any unused portions. Do not use internal messages such as: "Do Not Mail", "Attorney", "Charge off", and "Fraud." Contact the credit reporting agencies to discuss the use of internal messages.

1 8 POSTAL CODE 15 441-455 AN R Report the postal code of the individual's address. Left justify and blank fill. CITY NAME 30 456-485 AN 0 Contains the city of the individual's address. DISTRICT NAME 30 486-515 AN 0 Indicates the district of the individual's address if available. COUNTY NAME 30 516-545 AN 0 Contains the county of the individual's address if available. PROVINCE/STATE NAME 35 546-580 AN 0 Indicates the Province or State of the individual's address if available. ADDRESS TYPE CODE 6 581-586 AN R Used to designate the type of address reported in this segment. See Appendix A for a list of valid codes. Field Field Name and Description Length Position Alpha/ Required/Number Numeric Optional RESIDENCE CODE 6 587-592 AN 0 Used to designate if the address described in this segment is owned or rented. If not available, blank fill. See Appendix A for a list of valid codes. COUNTRY CODE 3 593-595 AN R Contains the ISO standard country abbreviation. See Appendix A for a list of valid codes. ADDRESS VERIFICATION INDICATOR 1 596 AN R Contains a "1" if the address reported is known to be the address of an associated individual. Contains a "0" if the address reported is not a confirmed address. ADDRESS VERIFICATION

DATE 8 597-604 AN R This field is used to represent the date in which the ADDRESS was verified by the credit grantor as being the actual ADDRESS for the individual. If this field contains a date, the ADDRESS VERIFICATION field must contain a '1'. Report in date format. ADDRESS SINCE DATE 8 605-612 N 0 Report the date since the individual has been at this address. Report in date format. SUBJECT ID NUMBER 20 613-632 AN R Report the ID number of the person specified in this segment. Report in ID format. ID TYPE CODE 6 633-638 AN R Used to designate the type of ID number. See Appendix A for a list of valid codes. ID VERIFICATION INDICATOR 1 639 N R Indicates whether or not the reported ID has been verified. 0 - ID not verified 1 - ID verified

Field Name and Description Length Position Alpha/ Required/Number Numeric Optional ID VERIFICATION DATE 8 640-647 N R Indicates the date on which the report was verified. Report in date format. This field is used to represent the date in which the ID was verified by the credit grantor as being the actual ID number for the individual. If this field contains a date, the ID VERIFICATION INDICATOR field must contain a '1'. Report in date format. IPHONE COUNTRY CODE 3 648-650 N 0 Used to designate the country code for the telephone. If the country code is not available, zero fill. PHONE NUMBER 20 651-670 AN 0 Contains the phone number of the individual specified in this segment. If the phone number is not available, blank fill. PHONE EXTENSION 10 671-680 AN 0 Designates the telephone extension. If the phone extension is not available, blank fill. PHONE NUMBER TYPE CODE 6 681-686 AN 0 Used to designate the type of phone number. See Appendix A for a list of valid codes. PHONE NUMBER VERIFICATION 1 687 N R, INDICATOR Indicates whether or not the phone number has been verified. 0 - not verified 1 - verified

PHONE NUMBER VERIFICATION DATE 8 688-695 N R This field is used to represent the date in which the phone number was verified by the credit grantor as being the actual phone number for the individual. If this field contains a date, the PHONE NUMBER VERIFICATION INDICATOR field must contain a '1'. Report in date format. SEGMENT SEQUENCE NUMBER 4 696-699 N R Used to assign a unique sequence number to the individual described in this segment. If more than one record of this type is used to describe the same known or unknown relationship, all records must contain the same number.

Field Name and Description Length Position Alpha/ Required/Number Numeric Optional LANGUAGE TYPE CODE 3 700-702 AN R Designates the subject's language. RESERVED 25 703-727 AN 0 Blank fill. FILLER 10 728-737 AN 0 Blank fill.

Segment 21 (Commercial Financial) Note: This segment is reserved for future use.

Field Name and Description Length Position Alpha/ Required/Number Numeric Optional SEGMENT IDENTIFIER 2 1-2 N R Must contain a constant of 21. BUSINESS STARTED YEAR 4 3-6 N R Contains the year the business was started. Format is YYYY. If not used, zero.

OPERATING STATUS CODE 6 7-12 AN R Used to designate the operating status of a business. See Appendix A for a list of valid codes.

DATE OF INCORPORATION 8 13-20 N R Contains the date of incorporation. Report in date format.

LOCATION OF INCORPORATION CODE 6 21-26 AN R Indicates where the business was incorporated. See Appendix A for a list of valid codes.

PRIMARY INDUSTRY CODE 10 27-36 AN R Used to designate the primary business. See Appendix A for a list of valid industry codes.

SECONDARY INDUSTRY CODE 10 37-46 AN 0 Used to designate the secondary business. See Appendix A for a list of valid industry codes.

IBUSINESS TYPE CODE 6 47-52 AN R Used to designate the type of business. See Appendix A for a list of valid codes.

REPORT DATE 8 53-60 N R Contains the date on which the financial information was reported. Report in date format.

INUMBER OF EMPLOYEES 10 61-70 N 0 Report the total number of employees for the business. Right justify and zero fill. If not used, zero fill.

I 1 VALUE OF CURRENT ASSETS 15 71-85 N R Report the current assets value. Report in amount format.

Field Name and Description Length Position Alpha/ Required/Number Numeric Optional VALUE OF FIXED ASSETS 15 86-100 N R Report the fixed assets value. Report in amount format.

I 3 VALUE OF CURRENT LIABILITIES 15 101-115 N R Report the book value of the current liabilities for the business. Report in amount format.

VALUE OF LONG TERM LIABILITIES 15 116-130 N 0 Report the book value of the long term liabilities for the business. Report in amount format.

I 5 NET ANNUAL INCOME 15 131-145 N R Report the annual net income for the business. Report in amount format.

I 6 NET ANNUAL INCOME INDICATOR 1 146-146 N R Indicates whether the annual income is a positive (gain) or negative (loss) number. 0 - the amount reported is a positive number 1 - the amount reported is a negative number

I 7 VALUE OF EQUITY 15 147-161 N R Report the book value of the business equity. Report in amount format.

amount format.1 8 SALES VOLUME 15 162-176 N RReport the book value of the business salesvolume. Report in amount format.1 9 CURRENCY TYPE CODE 3 177-179 AN RContains the International StandardsOrganization (ISO) standard currency type,code. See Appendix A for a list of valid codes. AMOUNT MULTIPLIER CODE 6 180-185 AN RUsed to designate the scale used in reportingamounts. See Appendix A for a list of validCoRESERVED 25 186-210 AN 0Blank fill. FILLER 1 0 211-220 AN 0Blank fill. LSegment 24 (Commercial Name) Note: This segment is reserved for future use. Field Field name and Descriptions Length Position Alpha/ Required/Number Numeric Optional SEGMENT IDENTIFIER 2 1-2 N RMust contain a constant of 24. BUSINESS NAME 75 3-77 AN R, Report the name of the business. NAME TYPE CODE 6 78-83 AN RUsed to designate the type of business name. See Appendix A for a list of valid codes. LANGUAGE TYPE CODE 3 84-86 AN R, Designates the business's language. RESERVED 25 87-111 AN 0Blank fill. FILLER 10 112-121 AN 0Blank fill. Segment 31 (Historical Information) Field Field name and Descriptions Length Position Alpha/ Required/Number Numeric Optional SEGMENT IDENTIFIER 2 1-2 N@ RMust contain a constant of 31. IDATE 8 3-10 N RContains the date for which the paymenthistory in this segment is associated. CURRENT BALANCE AMOUNT 15 11-25 N 0Report the total balance for the month andyear reported. Report credit balances(negative balances) as zero. Report in amount,format. LAST PAYMENT AMOUNT 1 5 26-40 N 0Report the amount paid for the month and yearreported. Report in amount format. PAST DUE AMOUNT 15 41-55 N 0Indicates the amount past due for the monthand year reported. Report in amount format. Ifthe account status is current, this field shouldbe zero. Do not include the current amount due,in this field. TERMS AMOUNT 15 56-70 N 0Report the terms amount for the month andyear reported. Report in amount format. CHARGED OFF AMOUNT 15 71-85 N 0Contains the amount that has been subtractedfrom the balance due because of a charge toPoss. Report in amount format. RATE CODE 6 86-91 AN RContains the rate assigned to an account. See Appendix A for a list of valid codes. RESERVED 25 92-116 AN 0Plank fill. 1 0 1FILLER 1 0 117-126 AN 01131ank fill. Segment 41 (Collateral Information) Field Field name and Descriptions Length Position Alpha/ Required/Number Numeric Optional SEGMENT IDENTIFIER 2 1-2 N RMust contain a constant of 41. ICollateral DESCRIPTION CODE 6 3-8 AN 0\*Used to designate a type of collateral for theaccount or loan. If not used, do not report the41 Segment. See Appendix A for a list of validcodes. COLLATERAL VALUE 15 9-23 N 0\*Report the value of an account or loan1collateral. Report in amount format. COLLATERAL DATE 8 24-31 N 0\*Report the date on which the account or loancollateral was applied to an account. Report in date format. RESERVED 25 32-56 AN 0Blank fill. FILLER 10 57-66 ANBlank fill. Note: At least one of these fields must be supplied. Segment 61 (Account Number Change) Field Field name and Descriptions Length Position Alpha/ Required/Number Numeric Optional SEGMENT IDENTIFIER 2 1-2 N RMust contain a constant of 61. IACCOUNT NUMBER 35 3-37 AN RContains the

new account number assigned to  
an account. Do not blank fill. Left justify andspace fill. Do not include embedded blanks orspecial characters. RESERVED 25 38-62 AN 0Blank fill. FILLER 1 0 63-72 AN 0Blank fill. Segment 71 (Purchased Portfolio/Sold To) Note: This segment is reserved for future use. Field Field name and Descriptions Length Position Alpha/ Required/Number Numeric Optional SEGMENT IDENTIFIER 2 1-2 N RMust contain a constant of 71. PURCHASED PORTFOLIO OR SOLD TO 6 3-8 AN R, NAME CODEUsed to designate the name of the companyfrom which the portfolio was purchased or towhom the account was sold. See Appendix Afor a list of valid codes. -INDICATOR 1 9-9 N RContains a code representing the type ofinformation being reported. Values are: I - Portfolio purchased from name2 - Sold to name3 - Remove previously reported segment,information RESERVED 25 10-34 AN 0Blank fill. FILLER 1 0 35-44 AN 0Plank fill. Segment 91 (Employment) Field Field name and Descriptions Length Position Alpha/ Required/Number Numeric Optional SEGMENT IDENTIFIER 9 1-2 N RMust contain a constant of 91. EMPLOYER NAME 75 3-77 AN RReport the name of the employer for theconsumer reported in the Consumer NameSegment. FIRST LINE OF EMPLOYER ADDRESS 60 78-137 AN 0Contains the mailing address for the employerin field 2 and usually includes the streetnumber, direction, street name, and type

of thoroughfare. Left justify and blank fill. If the address is unknown, blank fill. SECOND LINE OF EMPLOYER ADDRESS 60 138-197 AN 0 Usually contains the city and province. Left justify and blank fill. If unknown, blank fill. EXTRA LINE OF EMPLOYER ADDRESS 60 198-257 AN 0 Contains the third line of address information for the employer. Left justify and blank fill. If not used, blank fill. EMPLOYER POSTAL CODE 1 5 258-272 1 AN 0 Report the postal code of the employee's address. Left justify and blank fill. If not used, blank fill. CITY NAME 30 273-302 AN 0 Contains the city of the employee's address. DISTRICT NAME 30 303-332 AN 0 Contains the District of the employee's address. COUNTY NAME 36 333-362 AN 0 Report the county of the employee's address if available. 1 0 PROVINCE/STATE NAME 35 363-397 AN 0 Report the Province or State of the employee's address if available. 1 1 COUNTRY CODE 3 398-400 AN 0 Contains the International Standards Organization (ISO) country abbreviation. I I I I Field name and Descriptions Length Position Alpha/ Required/Number Numeric Optional OCCUPATION TYPE CODE 6 401-406 AN 0 Indicates the title or position for the consumer reported in the Base Segment. See Appendix A for a list of valid codes. 1 3 DATE HIRED 8 407-414 N 0 Indicates the date on which the consumer was hired. Report in date format. DATE LEFT 8 415-422 N 0 Indicates the date on which the consumer left the position. Report in date format. 1 5 REASON LEFT CODE 6 423-428 N 0 Used to designate the reason why a consumer left an employer. See Appendix A for a list of valid codes. VERIFICATION INDICATOR 1 429-429 N 0 Indicates whether or not the consumer's employment has been verified. Valid values: 1 - employment verified 0 - not verified. VERIFICATION DATE 8 430 N 0 This field is used to represent the date in which the employment was verified by the credit grantor as being the actual employment for the subject. If this field contains a date, the EMPLOYMENT VERIFICATION field must contain a '1'. Report in date format. 1 8 SALARY AMOUNT 15 438452 N 0 Indicates the consumer's salary. Report in amount format. 1 9 SALARY CURRENCY CODE 3 453-455 AN 0 Used to designate the currency type used to report the consumer's salary. Use the ISO standard currency type code. See Appendix A for a list of valid codes. SALARY FREQUENCY CODE 6 456-461 AN 0 Required if you provided the consumer's salary. See Appendix A for a list of valid codes. Field name and Descriptions Length Position Alpha/ Required/Number Numeric Optional SALARY VERIFICATION INDICATOR 1 462-462 N 0 Indicates whether or not the consumer's salary has been verified. 0 - not verified 1 - verified. SALARY VERIFICATION DATE 8 463-470 N 0 Indicates the date on which the consumer's salary was verified. Report in date format. EMPLOYMENT TYPE CODE 6 471-476 AN 0 Used to designate the type of employment. See Appendix A for a list of valid codes. CONTACT NAME 50 477-526 AN 0 The name of the person who can be contacted at the consumer's employer. CONTACT POSITION TITLE CODE 6 527-532 AN 0 Used to designate the title of the employer contact person. See Appendix A for a list of valid codes. CONTACT PHONE COUNTRY CODE 3 533-535 N 0 Used to designate the country code for the telephone. If the country code is not available, zero fill. CONTACT PHONE NUMBER 20 536-555 AN 0 Contains the phone number of the contact person. If the phone number is not available, blank fill. CONTACT PHONE EXTENSION 1 0 556-565 AN 0 Designates the telephone extension. If the phone extension is not available, blank fill. LANGUAGE TYPE CODE 3 566-568 AN 0 Designates the subject's language. RESERVED 25 569-593 AN 0 Blank fill. IFILLER 1 1 0 1594-603 1 AN 0 1131 blank fill. Segment 92 (Other Income) Note: This segment is reserved for future use. Field name and Descriptions Length Position Alpha/ Required/Number Numeric Optional SEGMENT IDENTIFIER 2 1-2 N R Must contain a constant of 92. 10 OTHER INCOME TYPE CODE 6 3-8 AN R Used to designate the type of income. See Appendix A for a list of valid codes. JOTHER INCOME AMOUNT 15 9-23 N R Report the amount of the other income. Report in amount format. OTHER INCOME FREQUENCY CODE 6 24-29 AN 0 Used to designate the frequency at which the reported other income is received. See Appendix A for a list of valid codes. OTHER INCOME VERIFICATION INDICATOR 1 30-30 N R Indicates whether or not the consumer's other income has been verified. Valid values: 0 - reported, not verified 1 - income verified. OTHER INCOME VERIFICATION DATE 8 31-38 N R This field is used to represent the date in which the OTHER INCOME was verified by the credit grantor as being the actual OTHER INCOME for the subject. If this field contains a date, the OTHER INCOME VERIFICATION INDICATOR field must contain a '1'. Report in date format. OTHER INCOME CURRENCY TYPE CODE 3 39-41 AN R Contains the International Standards Organization (ISO) standard currency type code.

See Appendix A for a list of valid codes. OTHER INCOME SOURCE NAME 75 42-116 AN 0 The name of the source providing the other income. LANGUAGE TYPE CODE 3 117-119 AN R, Designates the subject's language. RESERVED 25 120-144 AN 0 Blank fill. 1 1 FILLER I 1 0 145-154 AN 0 Blank fill. Segment 99 (Trailer Record) Field name and Descriptions Length Position Alpha/ Required/Number Numeric -Optional RECORD IDENTIFIER 2 1-2 N R Contains a constant used to identify this record. Report the constant 99. TOTAL CURRENT BALANCE 1 5 3-17 N R Contains the accumulated total of all current balance amounts reported. Summarize the amount in the Consumer and Commercial Base for each Base Segment reported. ITOTAL PAST DUE 15 18-32 N R Contains the accumulated total of all past due amounts reported. Summarize the amount in the Consumer and Commercial Base for each Base Segment reported. TOTAL RECORDS SUBMITTED 1 0 33-42 N R Contains total number of segments being reported in the group. Include the Identification and Totals record. TOTAL OF CONSUMER BASE SEGMENTS 10 43-52 N R Contains the total number of consumer base segments (02). TOTAL OF COMMERCIAL BASE SEGMENTS 10 53-62 N R Contains the total number of commercial base segments (20), zero fill. TOTAL OF CONSUMER NAME SEGMENTS 10 63-72 N R Contains the total number of consumer name segments (04). TOTAL OF COMMERCIAL NAME 10 73-82 N R SEGMENTS Contains the total number of commercial name segments (24). TOTAL OF ADDRESS SEGMENTS 1 0 83-92 N R Contains the total number of address segments (06). 1 0 TOTAL OF ID SEGMENTS 10 93-102 R I Contains the total number of ID segments (08). 1 1 1 Field name and Descriptions Length Position Alpha/ Required/Number Numeric Optional TOTAL OF PHONE SEGMENTS 10 103-112 N R Contains the total number of phone segments (10). TOTAL OF RELATIONSHIP SEGMENTS 10 113-122 N R Contains the total number of relationship segments (12), zero fill. TOTAL OF COMMERCIAL FINANCIAL 10 123-132 N R, SEGMENTS Contains the total number of commercial financial segments (21), zero fill. ITOTAL OF HISTORY SEGMENTS 10 133-142 N R Contains the total number of historical segments (31). TOTAL OF COLLATERAL SEGMENTS 10 143-152 N R Contains the total number of collateral segments (41). TOTAL ACCOUNT NUMBER CHANGE 10 153-162 N R Contains the total number of account number changes (61). TOTAL PURCHASE/SOLD TO 10 163-172 N R Contains the total number of items purchased, or sold (71), zero fill. ITOTAL OF EMPLOYMENT SEGMENTS 10 173-182 N R Contains the total number of employment segments (91). TOTAL OTHER INCOME 10' 183-192 N R Contains the total for other income (92), zero fill. DATE CREATED 8 193-200 N R Indicates the date on which the media was created. Report in date format. RECORD NUMBER 10 201-210 N R Contains a number to uniquely identify a record within the group defined by the identification record. If a record number is provided, the credit reporting agency will return it with required error reporting. RESERVED 25 211-235 AN 0 Blank fill. FILLER 1 0 236-245 AN 0 Blank fill. Appendix A: ICCIF Code Types The following table is an alphabetical list of the ICCIF code types and their values. Note that the "name" field corresponds to the field names in each data segment. Code Type Value/Description Account Status Code 036001 - "Closed" 036002 - "Transferred" 036003 - "Refinanced" 036004 - "Paid - zero balance" 036005 - "Adjustment pending" 036007 - "Open" 036011 - "Paid - was surrendered" 036012 - "Paid - was collection" 036013 - "Paid - was repossession" 036014 - "Paid - from collateral" 036015 - "Paid - from guarantor" 036016 - "Paid - was charge-off" 036017 - "Paid - was foreclosure" 036018 - "Paid for less than balance" 036019 - "Paid by original" 036021 - "Wage Garnishment" 036022 - "Included in Bankruptcy" 036031 - "Paying - was charge-off" 036032 - "Paying - was collection" 036041 - "Foreclosure started" 036042 - "Deed received" 036043 - "Foreclosure" 036044 - "Voluntary surrender" 036051 - "Filed insurance - government" 036052 - "Filed insurance" 036053 - "Filed against guarantor" 036061 - "Early termination" 036062 - "Account assigned" 036063 - "Merchandise taken back" 036064 - "Balance reported as loss" 036071 - "Could not locate subject - now found" 036072 - "Cannot locate subject" n Code Type Value/Description Account Status Code 036081 - "Suspended" (continued) 036082 - "Account NOT included in bankruptcy" 036083 - "Paid - was public record" 036084 - "Account assumed by third party" 036085 - "Account secured" 036086 - "Arrangement made for partial payment" 036087 - "Paid - from insurance" 036088 - "Payment deferred" 036089 - "Involuntary Repossession" Account Type Code 039011 - "Bank - Credit/Charge" 039012 - "Retail - Credit/Charge" 039013 -

started" 036042 - "Deed received" 036043 - "Foreclosure" 036044 - "Voluntary surrender" 036051 - "Filed insurance - government" 036052 - "Filed insurance" 036053 - "Filed against guarantor" 036061 - "Early termination" 036062 - "Account assigned" 036063 - "Merchandise taken back" 036064 - "Balance reported as loss" 036071 - "Could not locate subject - now found" 036072 - "Cannot locate subject" n Code Type Value/Description Account Status Code 036081 - "Suspended" (continued) 036082 - "Account NOT included in bankruptcy" 036083 - "Paid - was public record" 036084 - "Account assumed by third party" 036085 - "Account secured" 036086 - "Arrangement made for partial payment" 036087 - "Paid - from insurance" 036088 - "Payment deferred" 036089 - "Involuntary Repossession" Account Type Code 039011 - "Bank - Credit/Charge" 039012 - "Retail - Credit/Charge" 039013 -

"T&E - Credit/Charge"039014 - "Personal Line-Of-Credit"039019 - "Other Revolving or Charge/Credit"039021 - "AutomobileNehicle Loan/Lease"039022 - "Durable Consumer Goods Loan"039023 - "Real Estate/Home/Mobile Home Loan"039024 - "Equity/2nd Home Loan"039025 - "Education Loan"039029 - "Other Installment Credit/Loan'039031 - "Checking Account"039032 - "Savings Account"039039 - "Other Banking/Finance Services"039041 - "Commercial Loan (Primary)"039042 - "Commercial Loan (Additional)'039043 - "Commercial Line-Of-Credit"039044 - "Commercial Real Estate Loan"039049 - "Other Commercial Credit/Loan"Address Type Code 007001 - "Personal residence"007002 - "Business"007003 - "Both residence and business"007004 - "Military"007005 - "Previous residence or business"Amount Multiplier Codes Future useAssociation Termination 044001 -"Closed by Consumer'Code 044002 - "Closed by Customer'044003 - "Closed by Operator"044004 - "Closed by Unknown Source'Business Title Code Future useCode Type Value/DescriptionBusiness Type Code 058001 - "Corporation"058002 - "Partnership"058003 - "Sub S. Corporation"058004 - "Sole Proprietorship"058005 - "Joint Venture"Collateral Description Code 042001 - "Vehicle"042002 - "House / Building"042003 - "Real Estate / Land"042004 - "Cash / Liquid Assets"042005 - "Equipment / Business Assets"042006 - "Stocks / Bonds"042007 - "Accounts Receivable Inventory"042008 - "Other Personal Assets"Country Name 032 - "Argentina"068 - "Bolivia"076 - "Brazil"124 - "Canada"152 - "Chile"222 - "El Salvador"320 - "Guatemala"340 - "Honduras"484 - "Mexico"528 - "Netherlands"558 - "Nicaragua"604 - "Peru"826 - "United Kingdom"840 - "United States"862 - "Venezuela"999 - 110ther"Currency Type Code 484 - "Mexican Peso"840 - "US Dollar"UD - "UDI"Employment Type Code 021 001 - "Full-Time"021002 - "Part-Time"021003 - "Commission"021004 - "Self-Employed/Contractor"Gender Code 002001 - "Female"002002 - "Male"Code Type Value/DescriptionID Type Code 009001 - "SSN/RFC"009002 - "IMSS - Tax ID"009003 - "Drivers License"009004 - "Passport"009005 - "Professional License"009006 - "IFE - Voter's Registration"009007 - "DUNS"Industry Code 0 1 1 1 00 - "Financial Services"01 1 1 1 0 - "Bank"01 1 122 - "Automotive Financing"01 1 123 - "Home Mortgage Financing"01 1 124 - "Business Financing"01 1 125 - "Savings & Loan"01 1 126 - "Credit Union"01 1 130 - "Security Broker / Dealer"01 1 140 - "Debt Collector"01 1 200 - "Merchandise Trade Wholesale/Retail"01 1 201 - "Department Store"01 1 21 0 - "Clothing Store"01 1 231 - "Automobile/Truck Dealer/Rental"01 1 233 - "Mobile Home Dealer"01 1 260 - "Restaurant - Food/Drink"01 1 261 - "Grocery Store"01 1 301 - "Non-Profit Trade Association"01 1 31 1 - "Jewelry Store"01 1 312 - "Pharmacy"01 1 360 - "Entertainment / Sports"01 1 376 - "Membership Club"01 1 382 - "Catalog Merchant"01 1 400 - "Consumer & Business Services"01 1 440 - "Business Services"01 1 441 - "Marketing / Advertising"01 1 452 - "Data Processing Services"01 1 453 - "Consulting Seivices"01 1 461 - "Automobile Rental & Leasing"01 1 490 - "Hotel / Motel Industry"01 1 495 - "Travel Agency"01 1 500 - "Manufacturing / Agriculture"01 1 51 0 - "Construction Contracting"Code Type Value/DescriptionIndustry Code (continued) 01 1 511 - "General Contractor -Residential"01 1 512 - "Heating, Plumbing, Central Air"01 1 513 - "Electrical Contractor"01 1 514 - "Masonry/Stonework/Tiles/Plaster"01 1 515 - "Carpentry"01 1 516 - "Roofing, Siding, Sheet Metal"01 1 517 - "Concrete Work Contractor"01 1 518 - "Special Trade Contractor"01 1 530 - "Agriculture / Forestry"01 1 531 - "Agricultural Cooperatives"01 1 532 - "Landscape & Horticulture Services"01 1 590 - "Miscellaneous Manufacturing"01 1 700 - "Utilities, Fuel, Transportation"0 1 1 71 1 - "Electric / Gas"01 1 713 - "Water"01 1 720 - "Mining / Petroleum"01 1 730 - "Telephone / Communications"01 1 750 - "Passenger Transportation"01 1 751 - "Airline / Air Carriers"01 1 752 - "Bus Line, Charters, Tour Buses"01 1 753 - "Suburb/Commuter Passenger Train"01 1 754 - "Ambulance Services"01 1 755 - "Taxicabs / Limousines"01 1 756 - "Steamship / Cruise Line"01 1 757 - "Boat Rentals & Leases"01 1 758 - "Marinas, Marine Services / Supplies"01 1 773 - "Railroads"01 1 780 - "Freight / Trucking / Railroad"01 1 781 - "Motor Freight Carrier, Trucking"01 1 782 - "Courier Services Air/Ground/Freight"01 1 783 - "Public Warehousing"01 1 800 - "Insurance"01 1 900 - "Government / Education"0 1 1 91 0 - "Miscellaneous Government"01 1 911 - "Local Government"01 1 912 - "State Government"01 1 913 - "Federal Government"01 1 920 - "Military"01 1 940 - "Miscellaneous Education"01 1 942 - "College / University"01 1 943 - "Business School"01 1 945 - "Vocational Training" A A A f% Cf% - "Medical / Health Services"Code Type Value/DescriptionIndustry Code (continued) 01 1 953 - "Dentistry"01 1 960 - "Hospital / Health Care"01 1 971 - "Child/Eider Care Facility"01

1973 - "Veterinary Services"01 1974 - "Accounting"01 1975 - "Legal Services"01 1976 - "Real Estate Agency"01 1977 - "Engineering"Language Type Code 187 - "English"001 - "Spanish"Location Of Incorporation 031 001 - "Federal"Code 031002 - "State"031003 - "Regional"031004 - 11citylName Suffix Code 005001 - "Je',005002 - "Se',00501 1 - " 1 st or I"005012 - "2nd or lit'005013 - "3rd or 11111005014 - "4th or IV"005015 - "5th or W005016 - "6th or VI"005017 - "7th or Vil"005018 - "8th or VIII"005019 - "9th or IX"Name Title Code 006100 - "Personal"006200 - "Professional"006300 - "Business"006400 - "Educational"006500 - "Government"006600 - "Religious"006700 - "Military"Name Type (Commercial) 028001 - "Doing Business As"028002 - "Legal"028003 - "Previous"Name Type Code 004001 - "Current Name"(Consumer) 004002 - "Also Known As Name"004003 - "Previous (Maiden) Name"Code Type Value/DescriptionOccupation Type Code 023011 - "Management and Government"023013 - "Business and Financial Operations"023015 - "Computer and Mathematical"023017 - "Architecture and Engineering"023019 - "Life, Physical and Social Science"023021 - "Medical and Health"023023 - "Community and Social Services"023025 - "Legal Operations"023027 - "Education, Training and Library"023029 - "Arts, Entertainment, Media, Sports"023031 - "Sales"023033 - "Office and Administration"023035 - "Protective Operations"023037 - "Food Preparation and Serving"023039 - "Buildings and Grounds Maintenance"023041 - "Personal Care and Service"023043 - "Farming, Forestry and Fishing"023045 - "Construction and Extractive"023047 - "Installation, Maintenance, Repair"023049 - "Manufacturing"023051 - "Transportation, Material Moving"023053 - "Military"Operating Status Code 029001 - "Active"029002 - "Pending"029003 - "In-Active"029004 - "Closed"02901 1 - "Bankruptcy Filed"029012 - "Bankruptcy Completed"Other Income Frequency 013001 - "Hourly"Code 013002 - "Daily"0 1 3003 - "Weekly"013004 - "Bi-Weekly"013005 - "Semi-Monthly"013006 - "Monthly"013007 - "Annually"Other Income Type 056001 - "Alimony"056002 - "Child Support"056003 - "Investment Earnings"056004 - "Trust"056005 - "Lottery"Code Type Value/DescriptionOwnership Code 016000 - "Undesignated"016001 - "Individual"016002 - "Joint Shared"016003 - "Joint Contractual Liability"016004 - "Authorized User"016005 - "Maker"016006 - "Co-Maker"016007 - "On-Behalf-Of"01 601 1 - "Account Terminated"016012 - "Delete Borrower"016013 - "Subject Deceased or Out-Of-Business"016014 - "Guarantor"Phone Country Code 1 - "United States"1 - "Canada"44 - "United Kingdom"51 - "Peru"52 - "Mexico"54 - "Argentina"55 - "Brazil"56 - "Chile"502 - "Guatemala"503 - "El Salvador"504 - "Honduras"505 - "Nicaragua"591 - "Bolivia"599 - "Netherlands"994 - "Venezuela"Phone Number Type Code 012001 - "Residence Telephone"012002 - "Residence Fax Machine"012003 - "Personal Cellular"012004 - "Work Telephone"012005 - "Work Fax Machine"0 1 2009 - "Other / Unknown"Portfolio Type Code 038001 - "Installment"038002 - "Revolving"038003 - "Open"038004 - "Line of Credit"038005 - "Checking"038006 - "Savings"038007 - "Mortgage"Code Type Value/DescriptionPosition Title Code 024001 - "Human Resources"024002 - "Supervisor"024003 - "Manager"024004 - "Company Executive"024005 - "Principal/Owner"024006 - "Other"Rate Code 037000 - "O - Too new to rate/no experience"037001 - "1 - Current, less than 2 payments pastdue"037002 - "2 - 30 to 59 days, less than 3 paymentspast due"037003 - "3 - 60 to 89 days, less than 4 paymentspast due"037004 - "4 - 90 to 1 1 9 days, less than 5 paymentspast due"037005 - "5 - 120+ days, 5 or more payments pastdue"037007 - "7 - Making payments/wage earner plan"037008 - "8 - Repossession"037009 - "9 - Charged off to bad debt"Reason Left Code 022001 - "Another Position"022002 - "Retirement"022003 - "Death"022004 - "Military Obligation"022009 - "Miscellaneous Voluntary"022011 - "Job Elimination"022012 - "Laid-Off - Downsizing"022013 - "Resigned after notice of dismissal"022019 - "Miscellaneous Involuntary"Relationship CodeConsumer to Consumer 060001 - "Spouse of"060002 - "Parent of"060003 - "Sibling of"061002 - "Child of"Consumer to 062001 - "is a Principal of"Commercial 062002 - "Is an Owner of"063001 - "Has a Principal who is"Commercial to 063002 - "Has an Owner who is"Consumer064001 - "Operates"064002 - "Is Parent Company of"Commercial to 065001 - "Is Operated by"Commercial 066002 - "Is a Subsidiary Company of"Code Type Value/DescriptionSalary Frequency Code 01 3001 - "Hourly"013002 - "Daily"0 1 3003 - "Weekly"013004 - "Bi-Weekly"013005 - "Semi-Monthly"013006 - "Monthly"013007 - "Annually"Special Comments Code 187001 - "Item in dispute - reported by supplier"187002 - "Subject disputed-resolved by

creditgrantor-subject disagrees"187003 - "Special handling-contact credit grantorfor additional information"18701 1 -"Payroll deduction"187021 - "Payments affected by natural disaster"187022 - "Subject recalled to military active duty"187023 - "Lost or stolen card"187031 - "Reported fraud accounf187061 - "No record of account by credit grantor"187091 - "Item in dispute - resolution pending"Terms Frequency Type 040001 - "Daily"Code 040002 - "Weekly"040003 - "Bi-Weekly"040004 - "Semi-Monthly"040005 - "Monthly"040006 - "Bi-Monthly"040007 - "Quarterly"040008 - "Semi-Annual"040009 - "Annually"04001 1 - "Net 30"040012 - "Cash-In-Advance"040013 - "Cash-On-Delivery"040019 - "Amount Deferred"Crudit Data Group Credit Data Groupot11481161 can can can Con con yeallif 1180!169 Con Jolt co co 7:81,110 Idnscoild Iticald necold @cn It co\$Crudit Data Rocard Crudit Data Rocard02 Cotistimor Doso 20 C0111110fdAl Mtoo04 Constimor Namo 06 Address Informallon06 Address Itiformintion 08 M0111111calloll 111formalloll00 l(folitllcollan Inforill,111011 10 Tolophono flumbor10 Tolophono Numbor 12 R013110fillill) 111forill.1tioll12 rloixilmship Inforialloti 21 Commorchl Financial31 I 1161011cal 111formalloll 24 C011111010.11 U311104 1 Collaloral Infortimllon 3 111121011cal Information61 Account Ntimbor Clump 4 1Collsforol Infomistlon71 Purchasod Portfolio Sold to Soumont 61 Accotint Numbor ChinUo9i Employment 71 Purchatiad floftfollosold to soulliont02 Othor InconnolnFig. li52constimor UasoConsumer SS#Consumer NamoConsumer Nomno Aodsess InfoID InloCmistimor AddressIlp Tolophono Telephom NumberOlhor InformillonFig. 2Cw'swites HontoAdtaellITots CW4in I If) I.Jo Cmitpalloves - Ngot 11 6144K t U%lo Cod\*141AddosoiC&do114141K4 - INAAAll utio C@jof 10. 310 custolnot systernll#r@d 11\*Ylalkv t somomifl 41011- closloillef syslaill m., roirn 1 1lltr@l itlopop I IviolMt Ufvtrounal falls a ofl2n(in1011- cuslombf SYSIC111 a nil n22bit ....l'otoloii Ciedil Systrem - 2 4100Fig. 17@ c Z.C-/CLOC-----SZL,81/66Sf/IDd 98S 1 1/00 OmINTERNATIONAL SEARCH REPORT International application NoPCTIJS99/197251%. CLASSIFICATION OF SUBJECT NIATTERIPC(6) G06F 17i6O, 17/X G06G 7/52US CL :705/38, 35According to International Patent Classification (IPC) or to both national classification and IPCB. FIELDS SEARCHEDMinimum documentation searched (classification systern followed bv classification sNnibois)tj S 705/38. 35Documentation searched other than minimum documentation to the extent that such documents are Included Ili the fields searched Electronic data base consutied during the international search (name of data base and. %% here practicable. scaich terms used)EAST,APSC. DOCUMENTS CONSIDERED'i-O BE RELEVANTCatesI Citation of document. with indication, where appropriate, of the relevant passages Relevant to claim No. x US 5,274,547 (ZOFFEL et al) 28 December 1993, col 2, lines 27- 1-3, 9, 14, 16-18, 66; col 5, lines 31-40; and col 23, lines 16 24, and 29.Ycol 2, lines 27-66; col 5, lines 31-40; and col 23, lines 16 1x US 51611,052 A (DYKSTRA et al) I I March 1997, col 5, lines 13- 1, 3, 9, 14, 16, 66 18, 24, and 29. Ycol 5,11nes 13 1Y, P US 5,897,621 A (BOESCH et al) 27 April 1999, col 4, lines 10-24, 4-7, 9, 15, 19-22,col 8, lines 24-66; and col 10, lines 31 24, and 30Further documents are listed in the continuation of Box C See patent 11,111111%. allne Special categories ot cited documenu later,jocunient itiolislied aiter die international tiling (tile or priorilvI El" I In colifict With die Application 1)(11 CI(ed to 1111derstaild'A' docudiew delminy, [lie Renerai itaiem the :irt wliicli is no(considered of beorv @illderlving tile iij%ennotiPdritcul'ir lele@allceX. doctinjent, ! f).irticular relevance. die clalille(I jivelldoll cailliol 1w earlier doctinlent pubitshed oil II[ after tile totenintioTial 1'3111le IAIC I 'I ,II L11111 Ile C, 'III I,JC I ell :I ;!I,, It I M Clit I@ C @Icj) '10cullicill "hich 1113% UITO@ 110tJOIS 01) @ ..... i@ claini(si or @khich Is wil.- lakell '11"llecce,i to tile [tjt]Ilc;lt1ol) 'I'le 'II .1110[iler or "III etipecidi ipecilled I doetiniCill I I ;eIC% OICe tile C,11111111 IW- f I "I% C All 111% Cl1lt@ e [et' 11 hell tile 11k-cunlenl z@leirin@ , Ili use. c1i,hiti,m ,r thel I 'Ile.1 @ I 'I I. It C dhe? "J@ i I 'I, I; II, el 0I I ,II -11, I[,.IL 'I,je.1 11 Ij,v .,it1" Cultiell, Ijj@ 11,11 i.,ICt 01.111 @l t :Ilelle pflorll@ -Wile'lDatC ot 111C 3CULai @:0111P!Ctklll Ili the intcnational Ncarch Date of niaihn2 ,I iiic inteniationai warch jeptioIt- I (Afl-K 0 9 NOV 19991 Naiae and mailine address' ot the ISA [ISQ01IIIISSIOnef 01 PACIMS And VM& NIMTKNBOX PCT 6IFFS W MYllRF%I,xshington. 1) L' 2023 1Facsimile No. (703) 305-3230 Telephone No. (703) 308-78431--orm PC'r,ISAi210 (second sheet)(Jull, 11)92)\*INTERNATIONAL SEARCH REPORT Intcmational application NoI)C-r,IJS99/19725C (Continuation) DOCUMENTS CONSIDERED TO 13E RELEVAN'rCaIC20M\* Citation of

document, with indication, where appropriate, of the relevant passages Relevant to claim No. y,P US 5,8787403 A (DEFRANCESCO et al) 02 March 1999, col 9, 1, 15, 16, and 30lines 58-61 and col 16, lines 46VP US 5,930,776 A (DYKSTRA et al) 27 Ju4 1999, col 5, lines 45- 1, 3, 9, 14, 16,64 and col 6, lines 1 18, 24, and 29Form PCTISA.210 (@;ontinuation of second sheet)(Jul) 1992)\*

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Set	Items	Description
S1	0	S TABLE (W) CURRENCY (W) CODE
S2	13142899	S TABLE (3N) CURREN?? OR MONEY? OR CASH?
S3	150	S CURRENCY? (N3) CONVERSION? (N2) TABLE?
S4	8069431	S BROKER? OR AGENT? OR INTERMEDIARY? OR (THIRD OR 3RD) () PARTY OR MIDDLEMAN OR MIDDLEMEN
S5	34714060	S TRANSACT? OR SALE? OR TRAD? OR DUTCHACTION? OR METAAUCTION?
S6	22	S S3 AND S4 AND S5
S7	19	RD (unique items)

Set Items Description

S1 6 AU=(GERMAN D? OR GERMAN, D? OR TSUEI H? OR TSUEI, H?)

S2 362579 BROKER? OR AGENT? OR INTERMEDIAR? OR (THIRD OR 3RD) () PARTY  
OR MIDDLEMAN OR MIDDLEMEN

S3 299104 TRANSACT? OR SALE? OR TRAD? OR PURCHAS? OR BUY??? OR SELL?-  
??

S4 137172 BID???? OR AUCTION? OR DUTCHACTION? OR METAAUCTION? OR MU-  
LTIAUCTION? OR OFFER?

S5 667491 USER? OR PERSON? OR MEMBER? OR SOMEONE OR PEOPLE? OR BUYER?  
OR CONSUMER? OR CUSTOMER? OR PURCHASER? OR SURFER? OR TRADER?  
OR BIDDER? OR SELLER? OR MERCHANT?

S6 392963 PAY????? OR BILL????? OR CHARG? OR SETTL? OR DUES OR CASH? -  
OR MONEY

S7 474827 ONLINE OR ON()LINE OR INTERNET OR INTRANET OR EXTRANET OR -  
WEB? OR HOMEPAGE OR HOME()PAGE OR NETWORK? OR PORTAL? OR WWW -  
OR CYBER OR LAN OR WAN OR ELECTRONIC?

S8 10918 S2(5N)S6

S9 680 S8(10N)S3

S10 168 S9(10N)S7

S11 103 S10(7N)S5

S12 66 S11 AND IC=G06F-017/60

show files

File 348:EUROPEAN PATENTS 1978-2002/Jul W02

(c) 2002 European Patent Office

File 349:PCT FULLTEXT 1983-2002/UB=20020718,UT=20020711

(c) 2002 WIPO/Univentio

Set Items Description

S1 17 AU=(GERMAN D? OR GERMAN, D? OR TSUEI H? OR TSUEI, H?)

S2 878654 BROKER? OR AGENT? OR INTERMEDIAR? OR (THIRD OR 3RD) () PARTY  
OR MIDDLEMAN OR MIDDLEMEN

S3 93227 TRANSACT? OR SALE? OR TRAD? OR PURCHAS? OR BUY??? OR SELL?-  
??

S4 122998 BID???? OR AUCTION? OR DUTCHACTION? OR METAAUCTION? OR MU-  
LTIAUCTION? OR OFFER?

S5 1721108 USER? OR PERSON? OR MEMBER? OR SOMEONE OR PEOPLE? OR BUYER?  
OR CONSUMER? OR CUSTOMER? OR PURCHASER? OR SURFER? OR TRADER?  
OR BIDDER? OR SELLER? OR MERCHANT?

S6 724390 PAY????? OR BILL????? OR CHARG? OR SETTL? OR DUES OR CASH? -  
OR MONEY

S7 2315846 ONLINE OR ON()LINE OR INTERNET OR INTRANET OR EXTRANET OR -  
WEB? OR HOMEPAGE OR HOME()PAGE OR NETWORK? OR PORTAL? OR WWW -  
OR CYBER OR LAN OR WAN OR ELECTRONIC?

S8 1 S1 AND S2

S9 14719 S2(10N)S6

S10 189 S9(15N)S3

S11 81 S10(15N)S7

S12 54 S11(15N)S5

S13 50 S12 AND IC=G06F-017/60

*all*  
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File 347:JAPIO Oct 1976-2002/Mar(Updated 020702)

(c) 2002 JPO & JAPIO

File 350:Derwent WPIX 1963-2002/UD,UM &UP=200246

(c) 2002 Thomson Derwent

Set Items Description  
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S2 1933030 BROKER? OR AGENT? OR INTERMEDIAR? OR (THIRD OR 3RD) () PARTY  
OR MIDDLEMAN OR MIDDLEMEN  
S3 112703 S2(5N)(PAY????? OR BILL???? OR CHARG? OR SETTL? OR DUES OR  
CASH? OR MONEY)  
S4 14527 S3(5N)(TRANSACT? OR SALE? OR TRAD? OR PURCHAS? OR BUY??? OR  
SELL???)  
S5 1295 S4(5N)(ONLINE OR ON()LINE OR INTERNET OR INTRANET OR EXTRA-  
NET OR WEB? OR HOMEPAGE OR HOME()PAGE OR NETWORK? OR PORTAL? -  
OR WWW OR CYBER OR LAN OR WAN OR ELECTRONIC?)  
S6 413 S5(5N)(USER? OR PERSON? OR MEMBER? OR SOMEONE OR PEOPLE? OR  
BUYER? OR CONSUMER? OR CUSTOMER? OR PURCHASER? OR SURFER? OR  
TRADER? OR BIDDER? OR SELLER? OR MERCHANT?)  
S7 184 S6 NOT PY>1999  
S8 173 S7 NOT PD=19990914:20020715  
S9 88 RD (unique items)

?show files

File 15:ABI/Inform(R) 1971-2002/Jul 20  
(c) 2002 ProQuest Info&Learning  
File 16:Gale Group PROMT(R) 1990-2002/Jul 22  
(c) 2002 The Gale Group  
File 148:Gale Group Trade & Industry DB 1976-2002/Jul 22  
(c)2002 The Gale Group  
File 160:Gale Group PROMT(R) 1972-1989  
(c) 1999 The Gale Group  
File 275:Gale Group Computer DB(TM) 1983-2002/Jul 22  
(c) 2002 The Gale Group  
File 621:Gale Group New Prod.Annou.(R) 1985-2002/Jul 22  
(c) 2002 The Gale Group  
File 95:TEME-Technology & Management 1989-2002/Jul W3  
(c) 2002 FIZ TECHNIK

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S2      234043      BROKER? OR AGENT? OR INTERMEDIAR? OR (THIRD OR 3RD) () PARTY  
            OR MIDDLEMAN OR MIDDLEMEN  
S3      1367304      PAY????? OR BILL???? OR CHARG? OR SETTL? OR DUES OR CASH? -  
            OR MONEY  
S4      1896984      TRANSACT? OR SALE? OR TRAD? OR PURCHAS? OR BUY??? OR SELL?-  
            ??  
S5      2089430      ONLINE OR ON()LINE OR INTERNET OR INTRANET OR EXTRANET OR -  
            WEB? OR HOMEPAGE OR HOME()PAGE OR NETWORK? OR PORTAL? OR WWW -  
            OR CYBER OR LAN OR WAN OR ELECTRONIC?  
S6      1946803      USER? OR PERSON? OR MEMBER? OR SOMEONE OR PEOPLE? OR BUYER?  
            OR CONSUMER? OR CUSTOMER? OR PURCHASER? OR SURFER? OR TRADER?  
            OR BIDDER? OR SELLER? OR MERCHANT?

S7      7960      S2(7N)S3  
S8      984      S7(5N)S4  
S9      82      S8(10N)S5  
S10     44      S9 AND S6  
S11     25      S10 NOT PY>1999  
S12     21      S11 NOT PD=19990914:20020715  
S13     20      RD [unique items]

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File 2:INSPEC 1969-2002/Jul W3  
      (c) 2002 Institution of Electrical Engineers  
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      (c) 2002 ProQuest Info&Learning  
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      (c) 2002 The HW Wilson Co.  
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      (c) 2002 Info. Today Inc.  
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File 474:New York Times Abs 1969-2002/Jul 19  
      (c) 2002 The New York Times  
File 475:Wall Street Journal Abs 1973-2002/Jul 19  
      (c) 2002 The New York Times  
File 583:Gale Group Globalbase(TM) 1986-2002/Jul 20  
      (c) 2002 The Gale Group

Set Items Description  
S1 0 AU=(GERMAN D? OR GERMAN, D? OR TSUEI H? OR TSUEI, H?)  
S2 2173416 BROKER? OR AGENT? OR INTERMEDIAR? OR (THIRD OR 3RD) () PARTY  
OR MIDDLEMAN OR MIDDLEMEN  
S3 99869 S2(5N) (PAY????? OR BILL????? OR CHARG? OR SETTL? OR DUES OR  
CASH? OR MONEY)  
S4 12383 S3(5N) (TRANSACT? OR SALE? OR TRAD? OR PURCHAS? OR BUY??? OR  
SELL???)  
S5 1237 S4(5N) (ONLINE OR ON()LINE OR INTERNET OR INTRANET OR EXTRANET  
OR WEB? OR HOMEPAGE OR HOME()PAGE OR NETWORK? OR PORTAL? -  
OR WWW OR CYBER OR LAN OR WAN OR ELECTRONIC?)  
S6 377 S5(5N) (USER? OR PERSON? OR MEMBER? OR SOMEONE OR PEOPLE? OR  
BUYER? OR CONSUMER? OR CUSTOMER? OR PURCHASER? OR SURFER? OR  
TRADER? OR BIDDER? OR SELLER? OR MERCHANT?)  
S7 160 S6 NOT PY>1999  
S8 146 S7 NOT PD=19990914:20020715

~~sort~~ ~~19990914:20020715~~ RD: (unique items)

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File 9:Business & Industry(R) Jul/1994-2002/Jul 19  
(c) 2002 Resp. DB Svcs.  
File 20:Dialog Global Reporter 1997-2002/Jul 22  
(c) 2002 The Dialog Corp.  
File 476:Financial Times Fulltext 1982-2002/Jul 22  
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File 636:Gale Group Newsletter DB(TM) 1987-2002/Jul 22  
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(c) 1999 Business Wire  
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00948709/9 Links

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00948709

UTILITIES USE INTERNET FOR BILLS, VENDOR PAYMENTS, POWER  
MARKETING

Energy Services & Telecom Report (formerly DSR)  
, Vol. 39, No. 25, Pg 10

June 18, 1998

JOURNAL CODE: DSR

SECTION HEADING: Technology ISSN: 1286-4008/96

WORD COUNT: 697

TEXT:

Utilities are increasingly turning to the Internet and other electronic media for a variety of services, including bill paying, vendor payments and marketing.

Among companies recently announcing electronic services are Consolidated Edison, PP&L and DQE. In addition, the Edison Electric Institute is helping its members institute electronic bill paying.

At its recent convention, EEI announced a joint venture with CyberCash Inc. to make the company's system available to members at a discount. The CyberCash PayNow Secure Electronic Check Service allows utilities and other providers to receive payments from consumers over the Internet.

According to EEI, electric utilities collect almost \$200-billion annually, and automating payments can cut processing costs significantly. CyberCash, based in Reston, Va., also says that electronic billing ``reinforces the biller's franchise and brand.'' This is possible because the consumer pays the supplier directly, on its web site, and not through a home banking service. The system can be used with credit cards, as well as debit and purchase cards. In addition, CyberCash can arrange cash transactions from bank accounts.

Consolidated Edison's Accounts Payable On-Line Internet service lets the company's vendors check the status of their invoices. Con Ed purchases \$4-billion in goods and services each year, and this system gives vendors real-time information, 24 hours a day.

To use the system, vendors access the web site (<http://www.coned.com/accountspayable/>) and enter a payee code or a purchase order number. They can then check invoices to determine when Con Ed received them and whether or not payment has been processed. Menu options allow sorting by invoice number and let the vendor see payment check numbers. The site also contains shipping instructions, sales tax information and e-mail for questions.

Con Ed already offers Internet payments and pay-by-phone options for retail customers. The utility recently started its Direct Payment Plan, which allows customers to pay electric and gas bills from their checking accounts. Under this plan, Con Ed automatically deducts the bill amount from the customer's bank. Information on all of these services is available on Con Ed's web site (<http://www.coned.com/cus/main.htm>).

Elsewhere, PP&L Spectrum--an affiliate of the utility--has launched IntelliBill, which is aimed at businesses that operate multiple facilities. Aside from tracking electricity, this system coordinates bills for other utilities and services, including gas, fuel oil, telephone, water and sewerage. PP&L Spectrum verifies, totals and tracks all bills, and arranges electronic fund transfers to make monthly payments. It also provides ledger information and analysis of utility use.

Customers can view their data anytime, via a secured location on the Internet. They can see scanned images of bill statements, as well as reports on utility use and costs at individual facilities. This information can be downloaded to spreadsheet software.

On a different track, Duquesne Enterprises, an affiliate of the Pittsburgh-based utility, has invested in North American Power Brokers, which arranges anonymous power and gas trades over the Internet. The company did not disclose its stake, but North American Power, based in Maynard, Mass., said it is less than a controlling share.

With the World Wide Retail Energy Exchange (REX), purchasers place their requests on a secure Internet web site without revealing their identities. Suppliers review the buyer's consumption profile and make proposals, which are evaluated by North American Power. It chooses the winning bid and is compensated by the supplier on a fixed-fee or percentage basis.

John Gaus, president of North American Power, said marketers spend a great deal of time and money on sales, but close less than 10% of the deals they pursue. At the same time, they often disclose their trading floor positions to non-buyers.

Aside from buying a stake in the company, Duquesne has also licensed the system. Gaus said utilities can use REX to acquire supplies for their customers, and it is negotiating with a number of unnamed utilities to license the system.

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COMPANY NAMES: Consolidated Edison ; CyberCash Inc ; Duquesne Enterprises ; DQE ; Edison Electric Institute ; North American Power Brokers ; PP & L Spectrum ; REX ; World Wide Retail Energy Exchange

03511185/9 Links

Dialog Global Reporter

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**03511185 (THIS IS THE FULLTEXT)**

**IRT Business & Finance (Wired On Friday): Big Apple not ready to abandon cash, trial finds**

CAROL POWER

IRISH TIMES , p 59

November 20, 1998

**Journal Code: FIRT Language: English Record Type: FULLTEXT**

**Word Count: 986**

Good old-fashioned cash is unlikely to be replaced by anything electronic just yet. A little more than a year ago this column featured a smart-card trial that was taking place on the upper west side of Manhattan. Twelve months later the trial has been deemed a failure and on December 31st will be shelved by its sponsors - MasterCard International, Visa USA, Citibank and Chase Manhattan Bank.

Smart cards are cards embedded with electronic chips. In this trial, people could transfer money from their bank accounts on to Visa Cash or MasterCard's Mondex cards at ATMs or buy them pre-loaded with money. They could then reload the cards when the money ran out.

Nearly 100,000 people were issued with these cards. The organisers thought they would use them particularly for small dollar purchases at local shops as they would be less cumbersome than bills and coins. In reality, however, few of the people who loaded the smart card in the first place, went to the trouble of reloading it and consumers reportedly found the cash-loading process cumbersome.

With so few using their smart cards, a third of the 600 merchants who originally signed up for the trial dropped out. About dollars 1 million ((pounds) 678,000) was spent using the cards - 30 per cent of that use was at smartcard readers on laundry machines in apartment buildings. Cardholders also chose to use the cards at grocery stores where credit and debit cards are already accepted.

The sponsors of the project concluded that several conditions were lacking for smart-card success in the US. 'These include further advances in inter-operability, expansion of venues into more geographies, and the emergence of unattended applications such as telephones, parking meters, and transit systems,' they said in a joint statement.

'All parties will continue to develop and test a variety of smart-card programs in 1999.'

Chase and Citibank have said the customers have until six months after card expiration dates to unload any remaining value at branches, ATMs or merchant kiosks.

The failure of the New York smart-card trial is yet another indication that cards stored with value have yet to find a business case.

Last year, MasterCard closed down the Mondex smart-card trial in Swindon, England, and it is also ending a similar trial in Ontario, Canada. And when Visa first introduced the Visa Cash stored value card at the Olympic Games in Atlanta in 1996, usage there was disappointing.

This week in Ennis, Co Clare, Visa Cash launched the first such trial in Ireland. Initial reaction from retailers has been mixed.

One area, though, where smart cards seem to be adopted with some success is in closed environments such as universities and military bases..

Throughout the US on some campuses, smart cards are being used to control access to buildings, such as the library, to pay for food at canteens and in vending machines on campus. In some cases, when these cards are issued to first-year students as identification cards but with other functions, they then have a reason to use them - for example, to buy books in the college bookstore.

The problem with the New York trial was that there wasn't a critical mass of people using the cards throughout the city. If people left the upper west side they couldn't use the cards anywhere else. While that trial is ending, another has taken off. The introduction of the MetroCard last year has matched expectations.

Although not a smart card, but a magnetic stripe card, it has replaced metal tokens for use on buses and subway trains. Given a huge advertising campaign and incentives such as free rides with dollars 15 or more on a card, New Yorkers have increasingly taken to using the MetroCard and its function is soon going to be adapted for use on phones.

It is perhaps yet another indication that what consumers want most of all is convenience and different ways to pay. A Dutch company, DigiCash, that set its sights on the use of electronic cash for small value purchases on the Internet, this month filed for bankruptcy.

The problem with DigiCash, said Mr David Stewart, vice-president of consulting firm Global Concepts in Georgia, was that it offered an electronic cash scheme that was Internet only.

It worked like a credit card in that it needed online authorisation in order for electronic cash transactions to clear, rather than a more flexible, off-line system.

Mercantile Bank in St Louis, Missouri was DigiCash's only US customer, although it had signed some international banks.

One reason for the system's failure, said Mr Larry Kirschner, senior vice-president of foreign exchange at Mercantile Bank, was that it was designed to capitalise on the perceived insecurity people had in using their credit cards over the Internet.

'The reality was they didn't have any insecurity and did use their credit cards on the Internet,' he said.

Mercantile had 5,000 customers of the e-cash system and they held 'significantly less' than dollars 100,000 in their e-cash accounts. 'The revenue stream was not there, the demand was not there from our customers and, quite frankly, it was not going to be there,' Mr Kirschner said.

DigiCash's failure does not indicate that there is any less enthusiasm for Internet commerce, said Mr Richard Crone, vice-president of CyberCash, DigiCash's main competitor.

'There's a great lesson in it,' he said, 'you must match the payment type to the application being sold.' DigiCash's drawback, he said, was to concentrate on one payment type - credit cards. CyberCash, on the other hand, offers three forms of payment - cash (pay before), cheque (pay now) and the credit card (pay later).

'As the applications for credit card and cheque continue to grow we need to wait for applications for electronic cash,' said Mr Crone. 'We're looking for a compelling application on the Internet to motivate people to fund a purchase in advance rather than now or later.'

Copyright 1998 Irish Times. Source: World Reporter (Trade Mark) - FT McCarthy.

**Company Names:** Chase Manhattan Corp

**Descriptors:** Corporate Finance; Company News

**Country Names/Codes:** United States of America (US )

**Regions:** Americas; North America; Pacific Rim

**SIC Codes/Descriptions:** 6211 (Security Brokers & Dealers)

06336974/9 Links

Dialog Global Reporter

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06336974 (THIS IS THE FULLTEXT)

The case for e-cash and \$60B in savings

NEVILLE NANKIVELL

FINANCIAL POST, p 09

July 22, 1999

**Journal Code: FFP Language: English Record Type: FULLTEXT**

**Word Count: 916**

ENDING CASH: THE PUBLIC BENEFITS OF FEDERAL ELECTRONIC CURRENCY

By David R. Warwick, Quorum Books, Westport, Conn., 213 pages, \$59.95  
(US)

Canadians have rapidly embraced the new world of electronic funds transfer. On a per capita basis, we're the world's heaviest bank machine users. We've taken to debit cards, direct deposits and pre-authorized bill payments with particular enthusiasm.

We have one of the world's fastest and most efficient electronic settlement and clearing systems for domestic payments. Pilot projects are under way on paying bus fares and the like electronically. Other smart-card uses are expanding here.

However, Canada, like other advanced economies, is still a long way from becoming the cashless society that some had imagined would be a reality by the next millennium. Cash payments in Canada and the United States still represent a big chunk of annual consumer expenditures -- an estimated 20% by value and 85% in terms of actual transactions. The volume of cash in circulation is still rising. More convenient access to bank machines has made tangible cash more readily available. In emerging market economies, such as in Latin America, wads of bills are still being plunked down for such big-ticket items as cars and even houses.

Yet as U.S. author David Warwick points out in his recently published book Ending Cash, the social and economic benefits of eliminating cash transactions could be truly profound. A lawyer, investor and researcher based in Santa Rosa, Calif., Mr. Warwick argues the U.S. should lead the way by becoming the first nation to go to federal electronic currency -- or what he calls a FEDEC system.

What he envisions is a mostly debit-card type of national electronic system run by the Federal Reserve Board, the U.S. central bank. Every individual and enterprise would have a FEDEC account and their identities would be known. The system would not provide credit or pay interest. It would be linked and "interchange" with private-sector banking networks. Smart cards with stored units of value, bank cards, credit cards and Internet payments could still be part of the overall system, along with cheques, bank drafts, travellers' cheques and such. Foreign visitors would

make payments this way. But actual tangible cash in the United States would be phased out over a span of years. Its form would be changed, but not the issuer -- the government. Existing central-bank monetary controls would be retained.

Mr. Warwick admits there would continue to be a reluctance to give up cash. Many people distrust government and financial institutions. But he makes the case that the result would be huge economic savings and positive outcomes such as eliminating cash-based crime -- which is often violent -- and tax evasion related to the cash-driven underground economy.

The cost and nuisance factor of handling and moving bills and coins would be ended. In the U.S., some estimates put this at \$60-billion (US) annually.

Trouble is, there are no signs of government or business pushing for a national electronic currency. There are also legitimate concerns over privacy and security and the potential for Orwellian government surveillance of the millions of individual and business accounts that would have to be registered with a national e-currency system. Nonetheless, Mr. Warwick believes a federal-government system "not only would warrant and receive high-level security but could be operated under principles recommended by privacy advocates."

His tracing of how electronic funds transfer networks have emerged proves the technology is feasible. Banks developed automated systems out of necessity. Personal chequing, which before the Second World War was mostly the preserve of the well-heeled, had exploded in the 1960s. But manual cheque processing was slow and costly. The Federal Reserve Bank in San Francisco set up the first electronic clearing system along with 10 other regional banks in the late 1960s.

Effective this year, all U.S. federal payments have to be made electronically. Some European countries have just about phased out cheques.

Canada's national automated payments network is regulated by the federal government but not run by it, although some have been advocating a greater state role.

The Liberal government intends to make sure the system is opened to wider membership -- allowing non-deposit takers such as life insurers, money market mutual funds and investment brokers to participate directly.

These reforms will take time to implement but should result eventually in new financial products that will help speed up the shift to a "less-cash" and chequeless society. Greater use of bank cards, smart cards and growth of Internet-based 'cybercash' will increasingly replace use of conventional cash.

The issue as Mr. Warwick sees it is whether tomorrow's electronic cash will be issued by federal governments or by private-sector institutions. He plumps for government on the grounds of cost and efficiency. But there's no reason why the private sector can't get the job done effectively and meet privacy and security concerns.

It's already showed the way with a variety of innovative cash-displacement products. The private-sector Canadian Payments Association is also getting involved in making Internet payments more secure. It will act as the certification authority in e-commerce transactions.

The role of government should be left to regulation -- to ensure the security and, within reason, the privacy of users of electronic transfer systems. Governments can also help by promoting the interlinking of these networks nationally and internationally. But they don't need to get

directly involved in managing their operations or starting up new systems. Let cash disappear gradually as competitive market developments supplant it -- but not before then.

Copyright 1999 National Post. Source: World Reporter (Trade Mark) - FT McCarthy.

**Descriptors:** Economic News; Science & Technology; General News; Society & Social Affairs

**Country Names/Codes:** United States of America (US) ; Canada (CA )

**Regions:** Americas; North America; Pacific Rim

**SIC Codes/Descriptions:** 6099 (Functions Related to Deposit Making); 7375 (Information Retrieval Services)

03511185/9 Links

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Although not a smart card, but a magnetic stripe card, it has replaced metal tokens for use on buses and subway trains. Given a huge advertising campaign and incentives such as free rides with dollars 15 or more on a card, New Yorkers have increasingly taken to using the MetroCard and its function is soon going to be adapted for use on phones.

It is perhaps yet another indication that what consumers want most of all is convenience and different ways to pay. A Dutch company, DigiCash, that set its sights on the use of electronic cash for small value purchases on the Internet, this month filed for bankruptcy.

The problem with DigiCash, said Mr David Stewart, vice-president of consulting firm Global Concepts in Georgia, was that it offered an electronic cash scheme that was Internet only.

It worked like a credit card in that it needed online authorisation in order for electronic cash transactions to clear, rather than a more flexible, off-line system.

Mercantile Bank in St Louis, Missouri was DigiCash's only US customer, although it had signed some international banks.

One reason for the system's failure, said Mr Larry Kirschner, senior vice-president of foreign exchange at Mercantile Bank, was that it was designed to capitalise on the perceived insecurity people had in using their credit cards over the Internet.

'The reality was they didn't have any insecurity and did use their credit cards on the Internet,' he said.

Mercantile had 5,000 customers of the e-cash system and they held 'significantly less' than dollars 100,000 in their e-cash accounts. 'The revenue stream was not there, the demand was not there from our customers and, quite frankly, it was not going to be there,' Mr Kirschner said.

DigiCash's failure does not indicate that there is any less enthusiasm for Internet commerce, said Mr Richard Crone, vice-president of CyberCash, DigiCash's main competitor.

'There's a great lesson in it,' he said, 'you must match the payment type to the application being sold.' DigiCash's drawback, he said, was to concentrate on one payment type - credit cards. CyberCash, on the other hand, offers three forms of payment - cash (pay before), cheque (pay now) and the credit card (pay later).

'As the applications for credit card and cheque continue to grow we need to wait for applications for electronic cash,' said Mr Crone. 'We're looking for a compelling application on the Internet to motivate people to fund a purchase in advance rather than now or later.'

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**Ecash**

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**ABSTRACT:** The growth of international interconnected computer networks and the pervasive trend in commerce of using these networks as a new field for business operations is stimulating demand for new payment methods. These new methods must attain unprecedented levels of security, speed, privacy, decentralization, and internationalization for digital commerce to be accepted by both consumers and businesses. Three such electronic payment methods are examined: 1. the generic, widely used electronic fund transfer, 2. the proposals for a digital cash standard, and 3. the real-world technology called Ecash. These methods are examined in terms of the dynamics of transaction clearance; the effects on money supply and the macroeconomy; their classification in terms of money and cash; and the comparative viewpoints of monetary authorities, financial institutions, and consumers.

**TEXT:** Headnote: Driven by inherent weaknesses in traditional paper-based payment methods, networked companies and their customers around the world now have at least three pervasive electronic options to move

Headnote: the numbers between their online accounts.

THE extraordinary growth of international interconnected computer networks and the pervasive trend in commerce of using these networks as a new field for business operations is stimulating demand for new payment methods. These new methods must attain unprecedented levels of security, speed, privacy, decentralization, and internationalization for digital commerce to be accepted by both consumers and businesses. This article analyzes three such electronic payment methods:

\*The generic, widely used electronic fund transfer

\*The proposals for a digital cash standard

\*The real-world technology called Ecash

These methods are examined in terms of the dynamics of transaction clearance; the effects on money supply and the macroeconomy; their classification in terms of money and cash; and the comparative viewpoints of monetary authorities, financial institutions, and consumers. This article does not go into detail on the myriad encryption systems, protocols, algorithms, and other technical matters concerning the new systems. These are all secondary aspects of electronic payment. Electronic payment systems are simply logical evolutionary steps that began with recognition of the limits of bartering. The need to pay for transactions is the root of all electronic payment systems.

Electronic Fund Transfer

THE electronic checking system for electronic payments has been in use since the late 1960s. For many consumer end users, electronic checking and electronic payment are the same thing, although the assertion does not apply in all cases. Electronic checking uses the existing banking structure to its fullest potential by eliminating paper checks. Electronic fund transfer and electronic checking are synonymous. Electronic fund transfer is an extremely varied system. Examples include: \*Paying university fees through the banking automatic teller machine (ATM) network,

\*Paying telephone bills through monthly bank account deductions, and

\*Large-value (ranging from thousands to millions of dollars) interbank overseas fund transfers. Conceptually, electronic checking, and almost all

electronic payments, involves three agents—the buyer, the seller, and the intermediary. The buyer initiates a transaction with the seller, and the seller demands payment. The buyer then obtains a unique certification of payment (the virtual equivalent of a check) from the intermediary. This certification (in electronic form) debits the buyer's account with the intermediary. The buyer then gives the certification to the seller and the seller gives the certification to the intermediary. The certification credits the seller's account with the intermediary. Schematically, the transaction is like a conventional checking transaction. But when conducted electronically, the certification is an electronic flow documented by the intermediary. Most important, delivery of the certification, transfer of the certification, and debiting and crediting of the accounts occur almost instantaneously. If the buyer and seller don't use the same intermediary, some standardized clearinghouse system between intermediaries is used, usually coordinated by the country's central bank (for domestic transactions) or by a third country (for international transactions and when the third country's central bank is a trusted authority).

Since electronic checking is essentially checking, it can be analyzed as if it were conventional checking. Payments made via electronic checking would be conducted without cash and paper. Instead of sending a check or paying at a counter, the buyer would initiate an electronic checking certification via computer or point-of-sale terminal. If such a transaction is done as a substitute for paying cash, electronic checking could substantially reduce the transaction's demand for money. Instead of carrying wads of cash, consumers could initiate an electronic fund transfer at precisely the moment of the purchase. In essence, such a payment system is not electronic checking but electronic cash. But if electronic checking becomes a substitute for conventional checking, the speed of the transaction would increase. From an economic standpoint, there is no difference in the dynamics of the checking process between electronic and normal checks, aside from the transaction cost reductions in paper handling. Electronic checking provides a number of advantages over paper checks:

Saved time. The instantaneous updating of account balances allows all financial players more financial flexibility. There is no clearing period for transactions to be finished, allowing large cost reductions and more opportunities in cases of large-sum arbitration, while giving even normal consumers and savers a great deal of financial freedom. Time savings are also considerable. Checks no longer have to be cashed and purchased at bank branches.

Reduced costs for paper handling. Universities are not overwhelmed with paper checks at the beginning of each term; banks aren't faced with unmanageable lines of people every payday; governments don't need large

check printing and mailing facilities; fewer trees are cut.

No bounced checks. Being virtually simultaneous, receipt of the certification and debiting and crediting of accounts ensures that no certification is made without the funds to back it up. Such payments could be done through an automatic confirmation of account status before the certification is issued. This operation is similar to the verification of the credit limit before credit card transactions are finalized, except it can be done on the buyer's side.

Flexibility. Electronic fund transfer is an extremely broad and generic field, used, in various forms, worldwide. Transactions range from small-value retail-level withdrawals through ATM networks to international large-turnover networks, like the Clearing House Interbank Payments System (CHIPS), an international payments clearing system set up by some of the largest New York commercial banks, now consisting of a network of more than 115 depository institutions around the world. CHIPS handles an average of 182,000 transactions a day worldwide, valued at \$1.2 trillion.

Electronic checking bypasses the physical weaknesses of paper checks, although it is still, in essence, a check. A critical weakness of checks is privacy, since transactions must pass through the banking system. Moreover, the banking system is obligated to document the details of every transaction passing through it to comply with federal regulations governing documentation of electronic funds transactions, namely Regulation E, which implements the Electronic Funds Transfer Act of 1979 (15 U.S.C. 1693). But what is to prevent a bank from selling or leaking such information to third parties, like marketing researchers and governments, risking the possible loss of personal civil liberties? Such was the case of Winai La-onsuwan, formerly known as the Buddhist monk Yantra Amarobhikkhu, whose alleged illicit adventures in an Australian brothel were documented through American Express receipts [6]; such evidence was critical in his being defrocked. An even more frightening scenario would be if governments demanded access to or control over electronic checking transactions or electronic checking records. What would prevent governments from, say, compiling lists of people who bought blacklisted books or patronized blacklisted businesses? Electronic fund transfer systems could conceivably be a tool for Big Brother to gain control over individual lives. As payment systems using electronic checking become more pervasive, is it necessary to sacrifice the privacy and undocumentability associated with cash?

#### Digital Cash

Many groups and individuals feel that cash itself still has a role as an electronic payment system. But digital cash—the electronic equivalent of paper cash—would have to reflect the consumer's view of cash's essential characteristics:

Anonymity. The buyer would pay the seller. Nobody, except the seller, would know the identity of the buyer or the details of the transaction. In cases where the buyer was using a sufficiently sophisticated pseudonym system, not even the seller would know the identity of the buyer. Aside from the personal records of the two agents, there would be no record of the transaction's having taken place. The certification of payment would be the payment. There would be no immediate transfer between accounts that banks could analyze to discern the exact flow of funds.

Liquidity. Digital cash would have to be accepted by all concerned economic agents as a payment method. For example, in the global Internet, true digital cash would involve a significant proportion of Internet merchants' accepting digital cash for digital cash to be more than electronic play

money. In pilot projects, there must be a large threshold of affiliated merchants willing to accept digital payment for the system to succeed.

On the institutional side, digital cash has many advantages over existing fiat money (paper money and coins), mainly involving the physical weaknesses of fiat cash. First, cash is at high risk of robbery; it must be kept in secure vaults and be guarded by security guards. The more cash is held, the greater the risk and the greater the investment in security. Second, cash has high transport costs. Because physical mass is proportional to the amount of cash held, large amounts of cash are difficult and expensive to store and move. It has been estimated that the handling costs of transporting cash in the U.S. amount to more than \$60 billion a year [4]. Last, the advent of high-quality color copiers and counterfeiting methods make government stores of cash insecure. It is widely documented that counterfeit currency is used as a weapon of economic war, with the goal of destabilizing national economies and governments [6]. Digital cash can take many forms, including prepaid cards and purely electronic systems:

Prepaid cards. Buyers can buy prepaid cards that are accepted by special sellers. For example, self-contained phone cards (such as those used in Asia and Europe) act as surrogates for coins in paying for public phones. The weakness of phone cards as digital cash is liquidity; no one would accept a phone card for the payment of a meal. Electronic toll-road payment systems suffer the same weakness. Recent pilot projects conducted in Australia by Visa International show more promise. Prepaid and rechargeable cards are accepted at the point of sale of a variety of merchants. Furthermore, to increase the system's acceptability, Visa subsidizes the cost of point-of-sale terminals. It is now possible to pay for a beer at the bar and a hotel bill with the same card [4]. Incorporation of digital cash functions into multipurpose smart cards, announced by MasterCard, involves a card that conforms to the latest standard from the EMV (Europay, MasterCard, Visa) consortium and includes dynamic public-key authentication. Such multipurpose smart cards potentially allow many functions, such as subscriber identity modules (SIMs) for Global System for Mobile Communications (GSM) phones, ATM transactions, encryption/decryption, and digital cash.

Purely electronic systems. Purely electronic digital cash would be devoid of explicit physical form, making it useful for network and Internet transactions in which the buyer and the seller are in physically remote locations. The payment would take place through electronic deductions of digital cash from the buyer and its transmission to the seller. The actual transfer of digital cash is usually encrypted by either public-key or private-key encryption systems so that only the intended recipient (the seller) can actually use the cash. However, institutional constraints, like U.S. export restrictions on advanced encryption systems, might impede the acceptance and practicality of digital cash. Furthermore, methods of ensuring anonymity must be in place so that fully electronic systems are not turned into variants of electronic checking systems.

In its various forms, digital cash is not always cash. If, for example, a financial institution were to issue digital cash, the creation of digital cash could be considered a withdrawal from that financial institution. Similarly, the financial institution would be obliged to credit user accounts for deposits of digital cash. The digital cash would not need real funds to back it up, other than a legal reserve limit for the original deposits. Digital cash could be considered cash in calculations of the money supply. Therefore, when currency includes cash, coins, and digital cash: (Formula Omitted)  
where MI is the money supply, LRR is the legal reserve limit on bank

lending, excess reserves are any nonobligatory reserves banks do not lend out, and MB is monetary base.

Withdrawing digital cash increases the ratios of currency/deposits and excess reserves/deposits, thus reducing the amount of deposits the financial institution has available for extending loans and reducing any dynamic effects on the expansion of the money supply.

If, on the other hand, a nonfinancial business were to issue digital cash, such issuance would simply be a purchase of one unit of digital cash with one unit of fiat cash. It could be backed up only by the willingness of merchants to accept digital cash as a unit of payment and not by any insurance (like the Federal Deposit Insurance Corp. [FDIC], the government agency that insures depositors' bank funds in the U.S.) or reserves. This nonbank type of digital cash is inherently riskier for the consumer than bank-issued digital cash. It is actually more like coupons than cash. Furthermore, redeeming fiat cash for non-bank-issued digital cash does not affect the monetary conditions of the economy. Buying digital cash does not affect the money-creation process; there is no decrease in the economy's capacity for loan creation and money supply creation.

#### Ecash

Now consider a real-world example of electronic payments. Ecash is an electronic payments system developed by the Digicash Co. of Amsterdam, The Netherlands, and is currently being implemented by the Mark Twain Bank of Missouri in the U.S. As of March 1996, another implementation of Ecash was initiated by the Merita Bank of Finland, but for the sake of consistency, only the Mark Twain Bank version is analyzed.

To undertake transactions, both buyer and seller have to have deposits in the Mark Twain Bank's WorldCurrency Access accounts. Access accounts are conventional checking accounts, insured by the FDIC but do not pay interest or have a fixed maturity period. Buyers must instruct the Mark Twain Bank to transfer funds from their WorldCurrency Access accounts into their accounts' Ecash Mint. Funds in the Mint are no longer deposits in the bank, and they are not insured. The Mint acts as a personal buffer account. At any time, buyers can order their computers to remotely interface with the Mint and withdraw funds from the Mint into the hard disk drives on their personal computers. The format of the funds is now completely electronic—a series of zeros and ones cryptographically secure and unique. It might be useful to consider the funds in the Mint and in the buyer's hard disk as being in an electronic wallet.

To make the payment, the buyer encrypts the appropriate amount of Ecash with a suitably secure encryption protocol and sends the Ecash to the seller. The Ecash can be sent to the seller by any data communications medium (e.g., email, ftp). Ironically, Ecash can even be saved onto a disk, printed onto paper, and the printed copy or disk sent to the seller. Sellers receive the Ecash and, after decrypting it, store it in their own computers. This can then be sent to the Mint and transferred into the seller's WorldCurrency Access account. The net result is a decrease in the buyer's funds and an increase in the seller's. Ecash is private. Although the Mark Twain Bank maintains records for each Ecash withdrawal and deposit (to comply with banking laws), it is impossible for the Bank to trace any subsequent uses of that Ecash. Lack of traceability is due to the fundamental specifications of the Ecash system, which is based on asymmetric public-key cryptography [2]. Specifically, it uses the RSA cryptographic system from RSA Data Security, Inc. with a key size of 768 bits. Such key size is not a maximum; it can be increased by the issuing bank. Besides being untraceable and anonymous, Ecash provides nonrepudiation; any disputes between a buyer and seller can be

unambiguously resolved. Nonrepudiation of transactions can also be a fundamental factor in the success and security of payment systems [1]. But although Ecash is purely electronic and is easily copied, it is impossible to use any Ecash twice because any Ecash must be verified with the Mark Twain Bank's database as never having been spent.

Given its nature, Ecash must be considered cash from the monetary standpoint. Ecash withdrawals from the user's account are leaks from the moneycreation process, just like cash withdrawals. If a user's WorldCurrency Access account had \$100 in it, and \$50 is withdrawn as Ecash, only \$50 (minus any legal reserve limit and excess reserves) could be lent out to other borrowers. Conversely, a \$50 Ecash deposit would give the Mark Twain Bank \$50 (again, minus legal reserve limit and excess reserves) to lend out.

#### Monetary Implications

Now consider some tendencies in all types of electronic payment. First is the long-term trend to increase the velocity of money flow in the national economy. As the growth of the credit card industry (actually a subset of electronic fund transfer) shows, increased convenience of payment is a significant factor in increasing the number of payments made. As electronic payments become more widespread and increasingly available to the consumer, we might expect a similar long-term trend of increased price level for goods and services in the economy and for increased economic growth through increased velocity of transactions. Also, the disembodiment of cash tends to create illusions as to its value. Transforming money from bills in your wallet into charged electrons on your hard disk is probably a greater abstract leap than the transformation of gold coins to fiat currency. As another evolutionary step in the development of money, we might expect consumers to reexamine their conceptions of money, cash, and value. Another significant impact is revealed by research into the roots of interest-rate margins in the money market. For example, Citicorp, one of the largest banks in the world, has claimed that around 40% of the interest charged on a consumer finance loan represents branch delivery and management costs. Such costs could be reduced substantially with increased adoption of electronic means of payments. This implies that the interest differentials in the money market could be dramatically reduced with adoption of consumer electronic payments, spelling drastic changes for the structure of the banking industry.

#### Standards, Competition, and Acceptance

Comparing these three electronic payment systems and their impacts, it should be noted that no single system is best. Which system is adopted depends largely on the details of the transaction and the needs of the people conducting the transaction. On the consumer side, survey data shows the single most important factor is wide acceptance of the system [7]. Thus, it may be that any system, whether formally standardized and secured or not, could gain market dominance and remain in that position by virtue of its being the ad hoc standard. Sellers would use it because most customers use it; customers would use it because most sellers use it. The main channel for competition among payment systems would be not in the cost of the system, but in gaining exclusive rights to the point of sale of a large number of merchants. This environment would make electronic payments widely available in a relatively short time but would not exactly be conducive to diversity or technologically innovative systems. This scenario would be analogous to the entrenched triopoly of Visa, MasterCard, and American Express in the credit card market.

An alternative to this situation might be the wide adoption of an open standard electronic payment system. If such a system were adopted, all intermediaries would jointly adopt an interoperable system, whereby the client of one system could transparently conduct transactions with any other seller whose intermediary uses the same system. Transparent transactions would be similar to the openness and competition in Thailand's ATM banking system, where the two ATM consortiums (ATM Pool and BankNet) support an open transactions system. The holder of a Bangkok Bank ATM card can withdraw money from, for example, a Thai Farmers Bank ATM. Such an open electronic payment system would have several advantages over a proprietary electronic payment system:

**Choice.** Users could be given greater choice among financial intermediaries and their services. Since there could be several intermediaries vying for the same open market, they would have to use a policy of differentiation. Such a structure would bring about a monopolistic competition type of marketthe market for open standard electronic payments. Hopefully, this differentiation would be to the benefit of the users.

**Policy.** Government policy implementation would be less ambiguous. Generally, the fewer heterogeneous systems there are to regulate, the more effective government policy would be on each system. Such relationships occur because each system would need a specific interpretation of the applicable laws. Since in most nations, the legislative process can't quickly enact new laws, the applicable laws tend to be arcane and controversial. Combined with the constrained capacity of the state, this lag might cause an ambiguous period of years before systems are finalized. The ambiguity during this period can kill off enthusiasm for new systems, leading confused consumers to adopt ad hoc methods or to return to conventional paper methods of payment. It could also lead to market distortions, as shortsighted governments could give anticompetitive concessions to single firms.

**Simplicity.** Open standard electronic payments systems would provide a consistent payment method from the user's side, where consistent interfaces are synonymous with system efficiency. Survey data [7] shows that simplicity is the second most important aspect in an electronic payments system. Thus, consistency in terms of transaction dynamics and interface of an open standard could contribute to the wide adoption of the open system.

Despite the advantages of open standard electronic payments systems, it is also likely that a variety of standards could simultaneously gain market acceptance. A heterogeneous market would not grow through conventional price competition but rather by seeking niches in the market. For example, it is highly likely that some form of electronic cash system will gain a market niche due to its unquestionable privacy. Besides the easily targetable markets of such socially deviant products as pornography, it would also gain acceptance from users uneasy with the fact that each of their transactions would be documented by the banking system. Fear of such information getting into the hands of bosses or governments would probably cause users to move to a more private system. An example of such concern for privacy is the case of the Clipper chip, where the perceived threat of U.S. government intrusion into personal communications is being publicly resisted.

Other niches might include government-subsidized systems for the payment of various state benefits. For example, an advanced virtual food stamp system has been implemented in New York City [8]. Grocery stores with a high proportion of food-stamp-using customers are required to install electronic payment systems at the point of sale. These customers can buy their

groceries without cash, allowing an automatic transfer of funds from their food stamp account to a grocery's account. This system reduces long lines at government offices, eliminates the black market in redeeming food stamps for cash, and significantly reduces the shuffling of paper by all parties. This system is used by 500,000 recipients and is reportedly favored over the old system by 94% of them.

#### Conclusions

As for any new technology, it would be impractical to view the status of electronic payments as clearly defined. Ambiguities exist in both the technological and institutional realms. Technological constraints include the insecurity of some types of payment systems, especially in the area of anonymity. Institutional constraints include government regulations that may cripple the growth of electronic payment systems even before they take off. Also, reluctance of existing financial institutions to adopt new payment technologies due to lack of investment funds can be a considerable hurdle, especially in countries with underdeveloped financial institutions. Probably most crucial, however, is the role of consumer acceptance in catalyzing system adoption. Although the technology has existed for decades to implement many systems, they have just begun to permeate the lives of ordinary consumers. The number of merchants (as of Jan. 1 1996) accepting Ecash is less than 100, according to Digicash's own registries. Card-based electronic cash systems have been implemented only in pilot projects in a handful of cities around the world. Nevertheless, the trends of modern commerce, driven by the weaknesses of traditional payment systems, point to the eventual rise of electronic payments. Electronic payments might not completely replace traditional systems, but there is plenty of room to grow. 1

#### Reference: References

1. Anderson, R. Why cryptosystems fail. Commun. ACM 37, 11 (Nov. 1994), 32-41.
2. Chaum, D. Security without identification: Transaction systems to make Big Brother obsolete. Commun. ACM 28, 10 (Oct. 1985), 1030-1044.
3. Levy, S. The end of money? Newsweek (Oct. 30, 1995), 62-65.
4. Levy, S. E-Money (that's what I want). Wired 2, 12 (Dec. 1995) <http://www.hotwired.com/wired/2.12/features/emoney.html>
5. Pincus, M. Econo-Terrorism. Real World Intelligence Alert (1995) <http://www.lookoutpoint.com/look/econo.html>
6. Police asked to examine credit card pay slips. Bangkok Post 50, 55 (Feb. 24, 1995), 1.
7. Weiler, R.M. Money, transactions, and trade on the Internet. MBA thesis, Imperial College, London, England, 1995 <http://graph.ms.ic.ac.uk/results>  
Wood, J.C., and Smith, D.S. Electronic transfer of government benefits. Federal Review Bulletin 77, 4 (Apr. 1991)

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